Why Attend ÜberConf 2018

ÜberConf is our flagship educational event for software engineers and technical leaders. With 11 concurrent tracks, 164 content-rich technical sessions including 20+ half-day workshops, 12 optional full day workshops;

ÜberConf is truly the ultimate destination for passionate technologists.

The focus of ÜberConf is entirely on the attendee-experience and nothing else!

WE OFFER

LEARN FROM THE BEST SPEAKERS
Our speakers are not simply vendor representatives -- they are industry recognized experts. They are published authors, consultants, executives, and open source leaders.

IN-DEPTH 90 MINUTE SESSIONS
Our longer session format, workshops, and multi-part sessions allow speakers to go in-depth and teach the detailed concepts you need to know.

AGILE PRACTICES
Speakers at ÜberConf emphasize and present on topics such as: Test Driven Development, Continuous Integration, Code Quality Measurements, Code Smells, Team Building, and Customer Collaboration.

UNDERSTAND WEB SECURITY
The web is an increasingly hostile environment for web applications. ÜberConf will include security focused sessions and workshops so you will understand the OWASP top 10 security concerns.

DEVELOP YOUR SOFT SKILLS
Effective engineers need significant technical depth and breadth and domain knowledge. In addition, there is another perhaps more vital aspect of being an architect - the soft skills. Communication, leadership, persuasion and more.

CLOUD ARCHITECTURES
ÜberConf will explore different cloud computing architectures and how you can take advantage of them.

Registration is open! Register today @ UberConf.com
Tuesday, Jul. 17

8:00 - 9:00 AM : EARLY REGISTRATION: PRE-CONFERENCE WORKSHOP ATTENDEES ONLY - WESTMINSTER BALLROOM FOYER

9:00 - 6:00 PM - Sessions

Session #1 @ LAKEHOUSE : Machine Learning Workshop by Brian Sletten
Machine Learning is all the rage, but many developers have no idea what it is, what they can expect from it or how to start to get into this huge and rapidly-changing field. The ideas draw from the fields of Artificial Intelligence, Numerical Analysis, Statistics and more. These days, you'll generally have to be a CUDA-wielding Python developer to boot. This workshop will gently introduce you to the ideas and tools, show you several working examples and help you build a plan to for diving deeper into this exciting new field.

Session #2 @ STANDLEY I : Kubernetes Working for You by Jonathan Johnson
At the end of this workshop, you will be comfortable with designing, deploying, managing, monitoring and updating a coordinated set of applications running on Kubernetes. Distributed application architectures are hard. Building containers and designing microservices to work and coordinate together across a network is complex. Given limitations on resources, failing networks, defective software, and fluctuating traffic you need an orchestrator to handle these variants. Kubernetes is designed to handle these complexities, so you do not have to. It's essentially a distributed operating system across your data center. You give Kubernetes containers and it will ensure they remain available. Kubernetes continues to gain momentum and is quickly becoming the preferred way to deploy applications.

In this workshop, we'll grasp the essence of Kubernetes as an application container manager, learning the concepts of deploying, pods, services, ingressions, volumes, secrets, and monitoring. We'll look at how simple containers are quickly started using a declarative syntax. We'll build on this with a coordinated cluster of containers to make an application. Next, we will learn how Helm is used for managing more complex collections of containers. See how your application containers can find and communicate directly or use a message broker for exchanging data. We will play chaos monkey and mess with some vital services and observe how Kubernetes self-heals back to the expected state. Finally, we will observe performance metrics and see how nodes and containers are scaled. Come to this workshop to learn how to deploy and manage your containerized application. On the way, you will see how Kubernetes effectively schedules your application across its resources.

Session #3 @ STANDLEY II : Agility Through Modular Architectures - From Modular Monoliths to Microservices by Kirk Knornetschild
No single architectural style solves all needs. Though microservices have taken the developer community by storm recently, they are not always the optimal solution. In some cases, a more monolithic architecture may be more suitable short term. Or perhaps a more traditional system of web services that allow you to leverage existing infrastructure investment is preferable. Fortunately, proven architectural practices allow you to build software that transcends specific architectural alternatives and develop a software system that gives the development team the agility to shift between different architectural styles without undergoing a time-consuming, costly, and resource intensive refactoring effort. Modularity is the cornerstone of these alternatives.

Session #4 @ COTTON CREEK I : Building Serverless Applications in AWS Workshop by Christopher Judd
Tired of trying to manage and maintain servers? Never have a large enough operations team? Don’t have a budget for running lots of server? Don’t want to pay for servers sitting idle? Afraid you might become so popular that you won’t be able to scale fast enough? Don’t worry, it is possible to alleviate these issues by moving to a serverless architecture that utilizes microservices hosted in the cloud. This type of architecture can support all different types of clients including web, mobile and IoT. During this hands-on workshop, you will build a serverless application utilizing AWS services such as Lambda, API Gateway, S3 and a datastore.

Session #5 @ COTTON CREEK II : Domain-Driven Design Workshop by Matt Stine
New architectural paradigms like microservices and evolutionary architecture, as well as the challenges associated with managing data and transactional contexts in distributed systems, have generated a renewed interest in disciplined software design and modular decomposition strategies. We know that the secret to obtaining the benefits of these architectures is getting the boundaries right, both at the team and the component/service level! Fortunately, there is a mature, battle-tested approach to system decomposition that is perfect for these architectures: Domain-Driven Design.

Session #6 @ WINDSOR : Angular (with TypeScript) Workshop by Raju Gandhi
Angular 1.0 has now been replaced by what the angular team refers to as simply Angular. Angular brings together some of the most promising new technologies in the web space like Components, Observables, Window.fetch all the while bundling together a set of "best" practices like dependency injection in one development stack. If you are looking to build powerful single page applications then Angular is your friend. In this workshop we will start from the ground up, and build our way through a simple application that will let us explore the various constructs, and familiarize ourselves with some of the new terminology in Angular. **This session will focus on the Angular 7**

Session #7 @ WAVERLY : Practical Refactoring - Tiny Steps to Better Code by Llewellyn Falco
The goal: Clean Code That Works, and getting there is half the fun. Working with a legacy mess can be frustrating, boring, dangerous, and time-consuming. When FIBs occur (FIBs = Fixes that Introduce Bugs) you often enter an endless Test and Fix cycle that can quickly escalate into a nightmare. I've been there, you've been there. How do we return to pleasant dreams?
Session #8 @ MEADOWBROOK I : Getting up to Speed With Java 9 by Venkat Subramaniam
Java 9 is by far the most significant update of the Java language. We can view Java 9 changes in three parts: improvements, additions, and advances. Quite a few things we could do in Java 8 or earlier have been improved, there are a few new additions, and of course the most noted change the module system or Jigsaw.

Session #9 @ MEADOWBROOK II : VueJS [1]: The last front-end framework you will ever need by Peter Pavlovich
VueJS is the new contender for ‘best front end framework’ and is running a very close second place to React in popularity amongst knowledgeable developers. It is gaining mindshare and has incredible momentum, all for very good reasons! Join us for this introductory, full day workshop in which we fully explore everything that makes VueJS the last framework you will ever learn... because you won’t ever want to use anything else again!

Session #10 @ FLATIRONS (2ND FLOOR) : Streaming Data with Apache Kafka by Tim Berglund
The toolset for building scalable data systems is maturing, having adapted well to our decades-old paradigm of update-in-place databases. We ingest events, we store them in high-volume OLTP databases, and we have new OLAP systems to analyze them at scale—even if the size of our operation requires us to grow to dozens or hundreds of servers in the distributed system. But something feels a little dated about the store-and-analyze paradigm, as if we are missing a new architectural insight that might more efficiently distribute the work of storing and computing the events that happen to our software. That new paradigm is stream processing.

Session #11 @ LONG’S PEAK (2ND FLOOR) : Building Evolutionary Architectures Workshop by Neal Ford
This workshop highlights the ideas from the forthcoming Building Evolutionary Architectures, showing how to build architectures that evolve gracefully over time.

Session #12 @ GRAY’S PEAK (2ND FLOOR) : Threat Intelligence Fundamentals by Aaron Bedra
This course will cover the foundations of threat intelligence. It will consist of a combination of lecture and lab where we will work through the concepts of detecting indicators of attack and compromise, and building automation to process and eliminate it. This is a fully immersive, hands on workshop that will include a number of techniques, tools, and code.

Wednesday, Jul. 18
7:00 - 8:00 AM : 5K FUN RUN & POWER WALK - MEET IN LOBBY
7:30 - 8:30 AM : BREAKFAST & LATE REGISTRATION - WESTMINSTER BALLROOM
8:30 - 10:00 AM - Sessions

Session #13 @ WESTMINSTER I-II : Java 9: The Key Parts by Venkat Subramaniam
Everyone (including your humble speaker) talks about Modularization. For once, let's focus on other interesting and exciting parts of Java 9 that does not involve modularization. In this presentation we will talk about key improvements and additions to the Java language and the JDK introduced in Java 9.

Session #14 @ WESTMINSTER III-IV : Essential Spring Boot by Craig Walls
In this example-driven presentation, you'll learn how to leverage Spring Boot to accelerate application development, enabling you to focus coding on logic that drives application requirements with little concern for code that satisfies Spring's needs.

Session #15 @ LAKEHOUSE : Roadmap to Refactoring the Monolith by Kirk Knornischl
Monoliths are out and microservices are in. Not so fast. Many of the benefits attributed uniquely to microservices are actually a byproduct of other architectural paradigms with modularity at their core. In this session, we'll look at several of the benefits we expect from today's architectures and explore these benefits in the context of various modern architectural paradigms. We'll also examine different technologies that are applying these principles to build the platforms and frameworks we will use going forward.
Session #16 @ STANDLEY I : Web Apps with Angular - Part I by Raju Gandhi
In this session we will take a look at building applications with Angular. We will build a very simple application from the ground up, and attempt to understand the approach of Angular, as well as understand some of the terminology that Angular introduces. **This session will focus on the Angular 7**

Session #17 @ STANDLEY II : The Influential Engineer - Overcoming resistance to change by Michael Carducci
By the end of this conference you will have learned many new tools and technologies. The easy part is done, now for the hard part: getting the rest of the team-and management-on board with the new ideas. Easier said than done. Whether you want to effect culture change in your organization, lead the transition toward a new technology, or are simply asking for better tools; you must first understand that having a “good idea” is just the beginning. How can you dramatically increase your odds of success? You will learn 12 concrete strategies to build consensus within your team as well as 6 technique to dramatically increase the odds that the other person will say “Yes” to your requests.

Session #18 @ MEADOWBROOK : Hands-on: Let’s save some Legacy Code by Llewellyn Falco
Like everyone else, you have a large product that is hard to work with. We're going to change that in 75 minutes. Together we will save some gnarly legacy code (one thousand-line function). We will start with something hard to read, untested, and possibly buggy. We will finish with code that is stupidly easy to modify. You'll learn 6 trivial techniques that you can apply over and over to fix 95% of the messiest code you have. You can take home this exercise to help the rest of your team learn these techniques. You'll also learn how your team can teach itself a bunch more techniques to handle the other 5%. We are going to save some legacy code. In 90 minutes. While adding features. We will mob program; you will save this legacy code. We won’t introduce any bugs along the way. We will spend the time that you would normally use reading code to instead make it readable. You can apply these techniques and reduce the cost of coding within 48 hours of getting home. We have done this exercise with dozens of teams. They code differently now. Changing existing code is actually safer and cheaper than writing new code. Their designs get a little better each day. This session will improve your code and show you what skills to learn to gain further improvements.

Session #19 @ COTTON CREEK I : Daily Development With Docker, Kubernetes, and OpenShift by Steven Pousty
For us developers, there has been a lot of change in the infrastructure where our apps will run. New to the mix is running in containers in some type of cloud enabled environment. After some basic concepts around containers and running them in production we go full on ALL DEMO, ALL THE TIME! I am going to show how to accomplish your local fast iteration development but now seamlessly deploy that to a frickin’ awesome run time platform a container platform based off of Kubernetes.

Session #20 @ COTTON CREEK II : Serverless State of the Union: 2018 by Matt Stine
On the 2017 tour, I introduced the notion of “serverless” and Functions as a Service (FaaS) platforms. We understood the motivation for serverless computing, compared serverless to other cloud-native infrastructure approaches, navigated some architectural tradeoffs, and took a whirlwind tour of the Big 3 FaaS providers.

Session #21 @ WINDSOR : Kafka Connect by Tim Berglund
Your goal is simple: take that is happening in your company—every click, every database change, every application log—and made it all available as a real-time stream of well-structured data? No big deal! You’re just taking your decades-old, batch-oriented data integration and data processing and migrating to to real-time streams and real-time processing. In your shop, you call that Tuesday. But of the several challenges to tackle, you’ll have to get data in and out of that stream processing system, and there’s a whole bunch of code there you don’t want to write. This is where Kafka Connect comes in.

Session #22 @ WAVERLY : Android Development, Part 1 by Kenneth Kousen
There are currently over two billion Android devices in the world, ranging from phones to tablets to wearables to automotive apps. Each of them supports development using the open source Android operating system. This talk will show how to create an Android project, work with Activities and Intents, and work with the underlying Gradle build system.

Session #23 @ FLATIRONS (2ND FLOOR) : An Architect’s Guide to Site Reliability Engineering by Nathaniel Schutta
Development teams often focus on getting code to production losing site of what comes after the design and build phase. But we must consider the full life cycle of our systems from inception to deployment through to sunset, a discipline many companies refer to as site reliability engineering.

Session #24 @ LONG’S PEAK (2ND FLOOR) : Are you Mocking Me (with Spock) by Ken Sipe
Spock is a groovy based testing framework that leverages all the “best practices” of the last several years taking advantage of many of the development experience of the industry. So combine Junit, BDD, RSpec, Groovy and Vulcans… and you get Spock! There are 3 tools I use on every Java project I control… this is one of them and with good reason.

10:00 - 10:30 AM : MORNING BREAK
10:30 - 12:00 PM - Sessions

**Session #25 @ WESTMINSTER I-II : Using Reactive APIs of Java by Venkat Subramaniam**
Reactive Programming is no longer an esoteric idea. Many libraries and tools have started providing excellent support for this idea of programming. So much that Java 9 has embraced this idea by including it into the specification. In this presentation we will take a dive into what reactive programming looks like from the Java specification point of view.

**Session #26 @ WESTMINSTER III-IV : Extreme Spring Boot by Craig Walls**
In this session, you’ll learn how to take your Spring Boot skills to the next level, applying the latest features of Spring Boot. Topics may include Spring Boot DevTools, configuration properties and profiles, customizing the Actuator, and crafting your own starters and auto-configuration.

**Session #27 @ LAKEHOUSE : Architecture in Anger by Kirk Knoernschild**
Big architecture up front is not sustainable in today’s technology climate where expectations are high for delivering high quality software more quickly than ever before. To accept change, teams are moving to agile methods. But agile methods provide little architectural guidance. Attempts to define the architectural vision for a system early in the development lifecycle does not work. In this session, we provide practical guidance for software architecture for agile projects.

**Session #28 @ STANDLEY I : Web Apps with Angular - Part II by Raju Gandhi**
In this session we will take a look at building applications with Angular. We will build a very simple application from the ground up, and attempt to understand the approach of Angular, as well as understand some of the terminology that Angular introduces. *This session will focus on the Angular 7***

**Session #29 @ STANDLEY II : Influential Engineer Part 2 - Persuasion Patterns by Michael Carducci**
In Part 1, you learned the core principles of influence and persuasion. How to we take this back to the office and apply what we’ve learned?

**Session #30 @ MEADOWBROOK : Developing Design Sense for your Code by Llewellyn Falco**
“In order to make delicious food… you need to develop a palate capable of discerning good and bad. Without good taste, you can’t make good food.” - Jiro Ono (World’s Best Sushi Chef) Many of us are stuck with messy code. We know it’s not great but it works and what can we do? Where and how do you start?

**Session #31 @ COTTON CREEK I : Converging Big Data And Web Applications by Steven Pousty**
For most of my lifetime in the computing world, data crunching and web serving were two very separate worlds. If a web app wanted access to the analysis there was a long process of ETL, DB work, imports and exports, and bribing various network and storage people for the resources you needed. With the rise of containers, orchestration, cheap computing and networking, and over 10 years of people tackling large problems at new scales we have finally come to a convergence.

**Session #32 @ COTTON CREEK II : AWS Lambda Deep Dive by Matt Stine**
In this presentation, we'll build, test, and deploy an image-processing pipeline using Amazon Web Services such as Lambda, API Gateway, Step Functions, DynamoDB, and Rekognition.

**Session #33 @ WINDSOR : Processing Streaming Data with KSQL by Tim Berglund**
It has been a while since you left the easy days of batch processing behind: the lazy ETL jobs that had all night to run, the relaxed SLAs that let you take lunches like Don Draper, the languid bankers’ hours: the salad days of your data processing career. Those days are over now, and producing real-time results on streaming data is the new order of the day. Two seconds is the new overnight.

**Session #34 @ WAVERLY : Android Development, Part 2 by Kenneth Kousen**
Building on Part 1, this talk will add REST capabilities, discuss how to work with SQL databases, and perform asynchronous methods in Android.

**Session #35 @ FLATIRONS (2ND FLOOR) : Sifting Technologies - Separating the Wheat From the Chaff by Nathaniel Schutta**
If you've spent any amount of time in the software field, you’ve undoubtedly found yourself in a (potentially heated) discussion about the merits of one technology, language or framework versus another. And while you may have enjoyed the technical debate, as software professionals, we owe it to our customers (as well as our future selves) to make good decisions when it comes to picking one technology over another.

**Session #36 @ LONG’S PEAK (2ND FLOOR) : Flying through Cloud Native (CNCF) by Ken Sipe**
The maturing of industry projects and tools around cloud development and administration has led to the formation of the Cloud Native Computing Foundation. This new foundation is similar to the Apache Foundation in that it provides governance over projects from incubation to maturity. These projects define the current and future standards of the cloud which is important for all devops teams to be aware of. This session is a guided at jet speed tour of each project and how it fits in the eco-system.
12:00 - 1:00 PM : LUNCH & OUTDOOR BREAK - WESTMINSTER BALLROOM & SOUTH COURTYARD

1:00 - 2:30 PM - Sessions

Session #37 @ WESTMINSTER I-II : Modern Java Frameworks for Building Microservices by Kirk Knoernschild
Microservice architecture is a modern architectural approach that increases development and delivery agility by focusing on building modular services. The framework we use has a tremendous impact on how quickly and easily we can deliver services. New frameworks are emerging that embrace new approaches for helping us deliver microservices.

Session #38 @ WESTMINSTER III-IV : Four Distributed Systems Architectural Patterns by Tim Berglund
Developers and architects are increasingly called upon to solve big problems, and we are able to draw on a world-class set of open source tools with which to solve them. Problems of scale are no longer consigned to the web's largest companies, but are increasingly a part of ordinary enterprise development. At the risk of only a little hyperbole, we are all distributed systems engineers now.

Session #39 @ LAKEHOUSE : Kotlin for Java Programmers by Venkat Subramaniam
Kotlin is a language that brings the strengths and capabilities of multiple languages into one. If you have looked at two or three different languages and said “I wish I could do this, that, and that also,” well now you can, thanks to Kotlin. In this presentation we will learn the key benefits and power of this exciting language.

Session #40 @ STANDLEY I : Navigating the Angular Router by Raju Gandhi
In this session we will explore the router that ships with Angular. We will see how to leverage its power and flexibility to build real world applications.

Session #41 @ STANDLEY II : Java 9 Memory and GC by Ken Sipe
So your server is having issues? memory? Connections? Limited response? Is the first solution to bounce the server? Perhaps change some VM flags or add some logging? In today's Java 9 world, with its superior runtime monitoring and management capabilities the reasons to the bounce the server have been greatly reduced.

Session #42 @ MEADOWBROOK : Introduction to Chaos Engineering by Matt Stine
Chaos Engineering, pioneered by Netflix, is the discipline of experimenting on a distributed system in order to build confidence in the system's capability to withstand turbulent conditions in production.

Session #43 @ COTTON CREEK I : Build Your Own JavaScript Framework (Or At Least Learn How) by Danny Brian
With new frameworks every day, what's one more? In this workshop we will code a simple, lightweight JavaScript framework. More importantly, we will examine the features that most frameworks address, patterns to use along the way, and reasons why you may or may not need a framework at all. This workshop will teach the keys to becoming a skilled front-end developer, and show you what bits of HTML5, CSS3, and JavaScript you'll need to build great applications.

Session #44 @ COTTON CREEK II : Essential Spring Data by Craig Walls
In this session, you'll learn how to use Spring Data to rapidly develop repositories for a variety of database types, including relational (JPA and JDBC), document (Mongo), graph (Neo4j), and others (Redis, Cassandra, CouchBase, etc).

Session #45 @ WINDSOR : Adaptive Threat Modeling by Aaron Bedra
Security should always be built with an understanding of who might be attacking and how capable they are. Typical threat modeling exercises are done with a static group of threat actors applied in “best guess” scenarios. While this is helpful in the beginning, the real data eventually tells the accurate story. The truth is that your threat landscape is constantly shifting and your threat model should dynamically adapt to it. This adaptation allows teams to continuously examine controls and ensure they are adequate to counter the current threat actors. It helps create a quantitative risk driven approach to security and should be a part of every security teams tools.

Session #46 @ WAVERLY : Mob Exploratory Testing Workshop by Llewellyn Falco
"All the brilliant people, working on the same thing, at the same time, in the same space, and at the same computer." - that is Mob Programming. When the activity we mob on is exploratory testing, or the viewpoint to being a programming mob is that of an exploratory tester, we call it Mob Testing. Mob testing - a group testing activity utilizing one computer - voices out the tacit knowledge in the group of individuals on shared tasks. Facilitated by an expert, it makes a great mechanism for building habits and transferring skills over passing knowledge.

Session #47 @ FLATIRONS (2ND FLOOR) : Accelerated Gradle by Kenneth Kousen
The Gradle build tool has been adopted by the vast majority of open source projects and is growing rapidly in industry as well. Gradle provides a powerful DSL for customizing and managing your build, with flexible configuration features and sophisticated dependency
management. Gradle is also actively supported by a commercial entity, and in partnership with companies like Netflix and LinkedIn is currently being optimized for performance.

Session #48 @ LONG'S PEAK (2ND FLOOR) : Productivity for the hopelessly disorganized by Michael Carducci
It happens to us all; there are simply days where it seems impossible to get anything done. This session focuses on techniques and tips to get into the zone, stay in the zone and to protect your productivity, even in disruptive environments.

2:30 - 2:45 PM : BREAK
2:45 - 4:15 PM - Sessions

Session #49 @ WESTMINSTER I-II : Building 12 Factor Apps with Java by Kirk Knoernschild
The way we build and deliver software is changing. We must deliver software more quickly than ever before and traditional approaches to software architecture, infrastructure and methodology do not allow us to meet demand. We've reached the limits of agility through process improvement alone, and further increases demand we focus on improving architecture, infrastructure, and methodology simultaneously. 12 Factor is an app development methodology for building modern apps in the modern era.

Session #50 @ WESTMINSTER III-IV : Container Friendly Java 9 by Ken Sipe
Containers and Micro-service are like peanut butter and jelly, they just go together. However do you know how resources are managed in a container and how that affects your application. This session will dive into how Java is affected living under control groups.

Session #51 @ LAKEHOUSE : Functional Programming Katas in Java (3 hours) by Venkat Subramaniam
Refactoring imperative code to functional style is a really good way to learn. What's even better, take a series of unit tests that pass, refactor the imperative code, and verify that the tests still pass after you make the code change. In this workshop we will take on a series of problems, already solved using imperative style, refactor that to functional style, and discuss the approach, techniques, pros, and cons.

Session #52 @ STANDLEY I : AWS Security Essentials by Aaron Bedra
Are you using or moving to AWS? Have you considered how you organize and secure your AWS environments? The growing push to cloud providers has allowed us to move faster and tackle problems more efficiently. The same freedoms that have allowed us to move faster have also created scenarios where security issues are exposed by accident and/or without proper management and review. As companies move toward more and more cloud usage, teams are pushed harder to ensure the same compliance and security requirements exist in slower moving private environments. This has the potential to put us right back where we came from.

Session #53 @ STANDLEY II : Microservices Architecture Fundamentals (UberConf) by Mark Richards
Microservices continues to be the latest buzzword in the industry, and probably will be for some time. If you are not sure what microservices is or want to start getting your feet wet in understanding the basics of this architecture style, then this session is just right for you. In this session I will cover the basics of the microservices architecture pattern. We'll talk about distributed architecture, what a microservice is, what the bounded context means, how to determine the right level of service granularity, the dangers of inter-service communication, and the role of the API layer. By the end of this session you will have a good idea of what the microservices architecture style is all about and whether it is a good fit for you.

Session #54 @ MEADOWBROOK : Architectures That Bend But Don't Break by Matt Stine
All software architectures have to deal with stress. It's simply the way the world works! Stressors come from multiple directions, including changes in the marketplace, business models, and customer demand, as well as infrastructure failures, improper or unexpected inputs, and bugs. As software architects, one of our jobs is to create solutions that meet both business and quality requirements while appropriately handling stress.

Session #55 @ COTTON CREEK I : Build Your Own JavaScript Framework (Or At Least Learn How) (continued) by Danny Brian
With new frameworks every day, what's one more? In this workshop we will code a simple, lightweight JavaScript framework. More importantly, we will examine the features that most frameworks address, patterns to use along the way, and reasons why you may or may not need a framework at all. This workshop will teach the keys to becoming a skilled front-end developer, and show you what bits of HTML5, CSS3, and JavaScript you'll need to build great applications.

Session #56 @ COTTON CREEK II : Extreme Spring Data by Craig Walls
In this session, you'll see how to take Spring Data's automatic repository generation to a whole new level. We'll look at ways to model data and manipulate Spring Data to produce repositories and APIs that are more than just CRUD layers on top of a database.
Session #57 @ WINDSOR : Docker for WebDevelopers by Michael Carducci
Modern web apps have many moving parts. Setting up development environments can be tedious. Truly mirroring staging and production environments can be a nightmare (especially when including app settings, security settings, back-end services etc.).

Session #58 @ WAVERLY : Pragmatic Approaches to Estimating Project Schedule or Cost by Johanna Rothman
Do you have to estimate schedule or cost for your innovation projects? If so, do you worry about providing an accurate—never mind precise—estimate? Estimation means “guess,” and our managers want our estimates to be commitments. Instead of providing guesses, help your managers understand risks with the ways you provide estimates or forecasts. You will learn the three ways to provide an estimate, how to recover when your estimates are off, and how to start the conversation about value instead of cost.

Session #59 @ FLATIRONS (2ND FLOOR) : Accelerated Gradle (continued) by Kenneth Kousen
The Gradle build tool has been adopted by the vast majority of open source projects and is growing rapidly in industry as well. Gradle provides a powerful DSL for customizing and managing your build, with flexible configuration features and sophisticated dependency management. Gradle is also actively supported by a commercial entity, and in partnership with companies like Netflix and LinkedIn is currently being optimized for performance.

Session #60 @ LONG'S PEAK (2ND FLOOR) : Infrastructure-As-A-Code with Ansible by Raju Gandhi
An integral part to any DevOps effort involves automation. No longer do we wish to manage tens, hundreds or even thousands of servers by hand, even if that were possible. What we need is a programmatic way to create and configure servers, be those for local development, all the way to production. This is where tools like Ansible come into play. Ansible offers us a way to define what our server configurations are to look like using plain-text, version-controlled configuration files. Not only does this help with avoiding “snow-flakes”, but it promotes server configuration to participate in the SDLC, pulling server configuration closer to the developers.

4:15 - 4:30 PM : BREAK

4:30 - 6:00 PM - Sessions

Session #61 @ WESTMINSTER I-II : Migrating to Java 9 - Jigsaw's Architectural Impact by Kirk Knoernschild
Java 9 with the Jigsaw module system is here. In this session, we’ll explore the basics of the Jigsaw module system and examine the impact it will have on how we build Java applications. We will dig into it’s major features, including dependency management and Jigsaw services. Once we understand Jigsaw’s basics, we will explore what it’s going to take to migrate existing Java application to Java 9 and leverage Jigsaw.

Session #62 @ WESTMINSTER III-IV : Kubernetes Deep Dive by Ken Sipe
In the container orchestration space, one of the top contenders is Kubernetes (K8S). This session will go into detail of each component in Kubernetes along with how to use it. Anyone attending this session should be able to easy get stated with K8S and have an understanding of what they would need to do to their application to enable it to be K8S friendly.

Session #63 @ LAKEHOUSE : Functional Programming Katas in Java (3 hours) (continued) by Venkat Subramaniam
Refactoring imperative code to functional style is a really good way to learn. What's even better, take a series of unit tests that pass, refactor the imperative code, and verify that the tests still pass after you make the code change. In this workshop we will take on a series of problems, already solved using imperative style, refactor that to functional style, and discuss the approach, techniques, pros, and cons.

Session #64 @ STANDLEY I : AWS Security Essentials (continued) by Aaron Bedra
Are you using or moving to AWS? Have you considered how you organize and secure your AWS environments? The growing push to cloud providers has allowed us to move faster and tackle problems more efficiently. The same freedoms that have allowed us to move faster have also created scenarios where security issues are exposed by accident and/or without proper management and review. As companies move toward more and more cloud usage, teams are pushed harder to ensure the same compliance and security requirements that exist in slower moving private environments. This has the potential to put us right back where we came from.

Session #65 @ STANDLEY II : Microservices Migration Patterns by Mark Richards
The path to migrating to Microservices from a monolithic or service-oriented architecture (or even starting a greenfield application) is riddled with challenges, pitfalls, canyons, demons, and even fire-breathing dragons. I like to call it “The Kings Road”. In this session I will show the migration patterns that allow you to easily fly over this challenging road and ease the pain associated with moving to microservices. I will also show you some automation tools you can use to help analyze your applications to determine how challenging this road will be.
Session #66 @ MEADOWBROOK : DDD and Microservices: Like Peanut Butter and Jelly by Matt Stine
As an architectural style, microservices are here to stay. They have crossed the proverbial chasm, and now it's time to get to work. Microservices provide us with the ability to create truly evolutionary architectures composed of cohesive and autonomous components using well known and characterized distributed systems patterns. As we create and compose components across the hard boundary of the network, we become deeply interested in establishing the correct boundaries and has resulted in renewed interest in system design and decomposition. Fortunately, the tried and true practices of Domain-Driven Design are available to us.

Session #67 @ COTTON CREEK I : Stories Every Developer Should Know by Neal Ford
Stories and lessons from architecture, design, process, and other sources, each illustrating important principles and pitfalls for modern architects.

Session #68 @ COTTON CREEK II : TypeScript: Because It's Useful by Jessica Kerr
Rod Johnson, creator of Spring, says TypeScript his new favorite language. "It's just so useful!" After working in Scala, Java, and Clojure for years, I have to agree. TypeScript is a perfectly practical compromise. It's designed for developers, not theorists. If you like static types, come learn what TypeScript offers that even Scala doesn't. Duck typing is charming when it includes unions and literals and partials. If you hate static types, learn how to keep them out of your way until they become useful. There are tricks for this.

Session #69 @ WINDORS : From Zero to Continuous Delivery - Concepts, Culture and Overview by Michael Carducci
Continuous delivery is not a pipe-dream technology, reserved only for the "cool kids" at hip tech startups. Although it's not easy, many concepts are within reach of most teams. That being said, it require more than simple technology changes. Attend this session to learn the fundamental concepts of CD, how to build your CD pipeline with Gradle and Jenkins, and recommendations on tools and best practices.

Session #70 @ WAVERLY : Agile Program Management: Measurements to See Value and Delivery by Johanna Rothman
Too many programs (collections of projects with one business deliverable) try to use team measurement to extrapolate to the program's status. That doesn't work. Teams have personal status, and you can't add them together to understand the program state. Or, your management wants to know when you will be done, and every team uses relative estimation and you can’t understand how to “add” them all together. (You can’t.) Instead of trying to “scale” measurements, measure what you want to see and what you don't want to see. You can use a handful of program measurements that help everyone understand where the program is and where it's headed. In this talk, Johanna will share program measurements—qualitative and quantitative—that show everyone the program state, and maybe when the program could be done.

Session #71 @ FLATIRONS (2ND FLOOR) : Cloud Native Spring: Discovery and Configuration by Craig Walls
In this session we’ll see how to use components of Spring Cloud to configure and discover microservices in a cloud native microservice-architected application. Specifically, we'll look at Spring Cloud Netflix and Netflix’s Eureka and Ribbon projects for service discovery as well as the Spring Cloud Config project's configuration server to provide a central point of external configuration.

Session #72 @ LONG’S PEAK (2ND FLOOR) : Ansible (best) practices by Raju Gandhi
Ansible, like Git, aims to be a simple tool. The benefit here is that the level of abstraction that Ansible offers is paper-thin, with no complicated workflows, or opinions enforced by the tool itself. The downside is that without a prescribed approach to Ansible, developing your playbooks often becomes a case of trial-and-error. As engineers steeped in the DevOps mindset we must be able to use the tool effectively, allowing us to accelerate **and** shorten the lead time from development to production.

6:00 - 7:30 PM : DINNER - WESTMINSTER BALLROOM & SOUTH COURTYARD
Keynote: Next Generation Microservices - Burr Sutter
8:30 - 10:00 PM - Sessions

Session #73 @ WESTMINSTER I-II : What's Brewing beyond Java 9 by Venkat Subramaniam
After years of stagnation, Java is one of the most vibrant languages of current times. Java 8 saw several improvements and Java 9 a few more. Well, that's only the beginning. Come to this talk to learn about where Java is heading, what's brewing in the language and the ecosystem, well beyond Java 9.

Session #74 @ WESTMINSTER III-IV : The Art of Problem Solving by Mark Richards
As Tech Leaders, we are presented with problems and work to find a way to solve them, usually through technology. In my opinion this is what makes this industry so much fun. Let's face it - we all love challenges. Sometimes, however, the problems we have to solve are hard - really hard. So how do you go about solving really hard problems? That's what this session is about - Heuristics, the art of problem solving. In this session you will learn how to approach problems and also learn techniques for solving them effectively. So put on your thinking cap and get ready to solve some easy, fun, and hard problems.
Session #75 @ LAKEHOUSE : Taming the Blockchain with Ethereum by Brian Sletten
Bitcoin has roundly entered the public consciousness, but it is limited in its use beyond the specific constraints of the cryptocurrency. Ethereum is a new platform that has enabled developers to innovate in creating their own cryptocurrencies, platforms, smart contracts and more.

Session #76 @ STANDLEY I : On being an effective developer by Raju Gandhi
As developers we not only operate in different contexts, but also often have these different contexts interplay as part of our work. Each of the tools that we use — version control systems like Git (along with collaborative tools like Github/Gitlab), IDE’s like Eclipse/IntelliJ, build systems like Gradle, CI/Cd tooling like Jenkins, Iaas tools like Ansible, the command line — all introduce context. To be effective developers we need to know when to operate in a certain context, combine or tease apart how these contexts interplay. Can you improve your release announcements if format your commit messages consistently? You bet! How should your build tool interact with your version control system? What does naming your files have to do with how you use your IDE?

Session #77 @ STANDLEY II : VDD: Value Driven Development - 10 Golden Rules for incremental Greatness by Michael Carducci
On the NFJS tour, there are questions that seem to come up again and again. One common example is "How do we determine which new tools and technologies we should focus our energy on learning?" another is "How do we stop management from forcing us to cut corners on every release so we can create better and more maintainable code?" which, after awhile becomes "How can we best convince management we need to rewrite the business application?" There is a single meta-answer to all these questions and many others.

Session #78 @ MEADOWBROOK : Thinking Architecturally by Nathaniel Schutta
Rich Hickey once said programmers know the benefits of everything and the trade offs of nothing...an approach that can lead a project down a path of frustrated developers and unhappy customers. As architects though, we must consider the trade offs of every new library, language, pattern or approach and quickly make decisions often with incomplete information. How should we think about the inevitable technology choices we have to make on a project? How do we balance competing agendas? How do we keep our team happy and excited without chasing every new thing that someone finds on the inner webs?

Session #79 @ COTTON CREEK I : Spring Skills: Building voice applications with Spring by Craig Walls
As a software developer, you've likely come across at least one veteran in our field who has shared tales of the old days when they used punch cards to give instructions to a computer. Thankfully, those days are long gone. Over time, the way we interact with machines has evolved through various stages such as textual, graphical, and touch/gestural user interfaces...up to today where Siri, Alexa, and Google Home are ushering in a new era of voice user interfaces.

Session #80 @ COTTON CREEK II : Augmented and Virtual Reality for the Web by Christina Kayastha
Augmented Reality and Virtual Reality are all the hype right now. Everyone who's anyone is talking about it. Tech giants are making huge investments on the platform and startups are popping up everyday. Where does the Web platform fall into this mix?

Session #81 @ WINDSOR : To 99.99 and Beyond by Ken Sipe
When architecting a critical system the "A"vailability of CAP theorem becomes the most important element. Architecture measures availability in 9s with 99.99% equating less than 1 hour of unplanned downtime. This session will focus on what it takes to get there.

Session #82 @ WAVERLY : Where Do Ideas Come From? Creating, Cultivating, and Communicating IP by Neal Ford
How do you create creativity? This talk offers techniques and perspectives to discover, grow, and project your ideas.

Session #83 @ FLATIRONS (2ND FLOOR) : Mental Bookmarks and the Fractal Nature of Success by Kenneth Kousen
Good discussions are supposed to diverge from their intended path. Free association is a feature, not a bug, and helps you see new connections between ideas. Without structure, however, it can be difficult to add context to new ideas and understand how they relate to more immediate problems. This talk discusses the technique of mental bookmarks -- how to remember where you were when a discussion diverged. In addition to giving you a reputation for having an amazing memory, the skill also helps with personal awareness in general.

Session #84 @ LONG'S PEAK (2ND FLOOR) : BOTastic Development: Developing internet robots for fun and profit. by Peter Pavlovich
Engaging your users has never been more important than it is today. Competition for user attention is fierce and ruthless. BOTs and Smart Speakers can thrill your users and give you the edge over your competitors. Join us for a fast-paced and entertaining exploration of this new way to attract, engage, retain and amaze your users!
Thursday, Jul. 19

8:00 - 9:00 AM : BREAKFAST - WESTMINSTER BALLROOM

9:00 - 10:30 AM - Sessions

Session #85 @ WESTMINSTER I-II : Microservices and Distributed Data by Mark Richards
Jorge Santayana is famous for saying “Those who cannot remember the past are condemned to repeat it”. When SOA (Service-Oriented Architecture) was all the craze, everyone got all excited about services, but forgot about the data. This ended in disaster. History repeats itself, and here we are with Microservices, where everyone is all excited about services, but once again, forgets all about the data. In this session I will discuss some of the challenges associated with breaking apart monolithic databases, and then show the techniques for effectively creating data domains and how to split apart a database. I consider the data part of Microservices the hardest aspect of this architecture style. In the end, it's all about the data.

Session #86 @ WESTMINSTER III-IV : A Practical Introduction to React by Venkat Subramaniam
React is a very targeted library for creating rich front end. While React does fairly well what it intends to provide, developing a practical application requires more than using React alone.

Session #87 @ LAKEHOUSE : Building Evolutionary Architectures by Neal Ford
An evolutionary architecture supports incremental, guided change along multiple dimensions.

Session #88 @ STANDLEY I : 9 Steps to Become Awesome with Kubernetes by Burr Sutter
Everybody seems to be rocking with Kubernetes and OpenShift! Even your favorite repos at GitHub are running on top of it. Don’t be the last developer to board this bullet train. Come and learn a LOT in this session about Kubernetes.

Session #89 @ STANDLEY II : Progressive Web Applications (Angular, React) by Christina Kayastha
Everyday our Web is growing more and more powerful. Progressive Web Apps bring the mobile web to a whole new level making it possible for the mobile web to compete with native applications.

Session #90 @ MEADOWBROOK : Java Serialization for Big Data by Daniel Hinojosa
Serialization is important for anything Big Data. We need to send information over the wire and we need to do so efficiently. This core concept presentation covers various serialization techniques and libraries. That way you can use Akka, Kafka, Spark, and various MQs efficiently

Session #91 @ COTTON CREEK I : Functions and Platforms and Containers, Oh My! by Nathaniel Schutta
Let me guess - your company is all in on “the Cloud” but no one can really agree what that means. You’ve got one group Dockering all the things while another group just rearchitected the Wombat system as a set of functions...as a service. It is enough to make a busy developer’s head spin - how do we make sense of all the options we have? I hate to burst your bubble, but there are no silver bullets, just a set of tools that we can leverage to solve problems. And just as a master carpenter knows when to use their favorite framing hammer and when they need to reach for the finish hammer, we need to use the right tool at the right time to solve our problems.

Session #92 @ COTTON CREEK II : Think Big, Plan Small: How to Use Continual Planning by Johanna Rothman
Many agile teams (and programs) attempt to plan for an entire quarter at a time. Something changes—a better product opportunity, or a product development problem—and the quarter’s plan is not just at risk. That plan is now impossible. Instead of quarterly planning, consider continual planning. Continual planning allows a project or a program to use small deliverables to plan for the near future and replan often to deliver the most value.

Session #93 @ WINDSOR : Cloud Native Spring: Tracing and Health by Craig Walls
In this session, we’ll look at how to monitor the health of individual services in a microservice-architected application as well as trace the path of data and processing as it flows from service to service. Specifically, we’ll look at Spring Cloud Netflix and Netflix OSS’ Hystrix project to not only apply the circuit breaker pattern for failure and latency protection to microservices and monitor the health of those circuit breakers in a running application. Additionally, we’ll look at Spring Cloud Sleuth and Zipkin to trace processing through a microservice-based application.

Session #94 @ WAVERLY : 12 (15) Factor App Workshop by Christopher Judd
Learn how to use Heroku’s 12 (15) Factor App methodologies to make your applications more portable, scalable, reliable and deployable.

Session #95 @ FLATIRONS (2ND FLOOR) : MySQL Optimization and Performance Tuning by Michael Carducci
This hands on workshop covers both the theory and practice of optimizing and tuning a production MySQL Database.
Session #96 @ LONG'S PEAK (2ND FLOOR) : What’s new in JavaScript (ES 2019) - Part I by Raju Gandhi

JavaScript will celebrate it's 23nd birthday in 2019. For a language that has been around for such a while it has seen very few, if any changes to the language itself. Well all that is about to change with ECMAScript.next (or ECMAScript 6). ECMAScript 6 modernizes JavaScript syntax, while bringing in features such as modules for better namespacing, class as a first class construct, and a variety of additional operators thus ensuring that JavaScript is ready for the next era of large scale modern web applications. ES 7, 8, 9 and now 10 all use the features introduced by ES6 to further the language.

10:30 - 11:00 AM : MORNING BREAK

11:00 - 12:30 PM - Sessions

Session #97 @ WESTMINSTER I-II : Microservices Communication Patterns by Mark Richards
Most of us just assume we will be using REST for microservices. However, there are sometimes issues associated with this assumption. There are several protocols that can be effectively used in addition to REST in microservices to significantly increase performance, robustness, and scalability when communicating to and between services. In this session I will discuss some of the patterns of communication to and between services, including REST, messaging, gRPC, and API Gateways. I will then talk about three key patterns of communication - orchestration, aggregation, and service gateways.

Session #98 @ WESTMINSTER III-IV : Developing with React: Components, State management, and Testing by Venkat Subramaniam
In this presentation, we will dig deeper into creating applications with React.

Session #99 @ LAKEHOUSE : Building Evolutionary Architectures: Architectural Fitness Function Katas by Neal Ford
Building Evolutionary Architectures requires identifying and creating architectural fitness functions. This hands-on workshop defines fitness functions and provides group exercises to help identify and discover them.

Session #100 @ STANDLEY I : Serverless Java with Kubernetes by Burr Sutter
Java developers have run their code in Application Servers for many years. However, the cloud paradigm brought new ways to think and design applications. One example of this change is the Serverless architecture where event-driven code is executed on an ephemeral container managed by a 3rd party. It doesn't mean that there are no servers involved, but for the developer's perspective, it means that they don't need to worry about them.

Session #101 @ STANDLEY II : Angular Mobile Toolkit (Progressive Web Apps) by Christina Kayastha
One of the things that makes Angular so powerful is all of the tooling that it comes with. One piece of tooling is the Angular Mobile Toolkit and how it helps you easily setup Progressive Web Apps. PWAs will help you create an offline first experience, so that even users with little or no connectivity can experience your web app.

Session #102 @ MEADOWBROOK : Java 9 Reactive Streams by Daniel Hinojosa
Many have already seen what Reactive Streaming can do: RXJava, Akka Streams, Project Reactor. Now reactive streaming is a part of the canonical package for Java and now we can handle asynchronous pipelines with boundaries and make better well thought out applications.

Session #103 @ COTTON CREEK I : Shaving the Golden Yak by Jessica Kerr
Programming is a series of frustrations. Everything we do, we could do better or faster if we only had our tools set up just so. If our error messages were a little better, our code a little cleaner, our tests a lot wider. When we spend time on this, it's known as "yak shaving," and it can get messy. How do you balance the work you're supposed to be doing with the work that makes your work, work? Dive into the yak stack with me. We'll see five different species of yak, and discuss how and when to tackle each one. At the bottom of the yak stack, we might find the Golden Yak, with secret wisdom engraved on its skin.

Session #104 @ COTTON CREEK II : Six Rules for Change by Esther Derby
Change is often much slower than hoped for, and more painful than anticipated. In the end, you may be left with feelings of frustration and dismay rather than the benefits you hoped for. How can we make change—whether it's adopting Scrum at the team level, or agile at the enterprise level—more successful, and more enlivening? Through my work with many organizations, I’ve distilled six principles for successful transformation. In this talk, we’ll explore these principles and how the support profound change.

Session #105 @ WINDSOR : Cloud Native Spring: Streams and Tasks by Craig Walls
In this session, we’ll see how to develop microservices that are components of a flow of data, but that do not necessarily involve REST. We’ll also see how to develop ephemeral microservices—microservice that are triggered to perform a job, then shutdown when that job is complete. Specifically, we’ll look at Spring Cloud Stream for flow-based microservices, Spring Cloud Task for ephemeral microservices, and Spring Cloud Data Flow which orchestrates those stream- and task-based services.
Session #106 @ WAVERLY : 12 (15) Factor App Workshop (continued) by Christopher Judd
Learn how to use Heroku’s 12 (15) Factor App methodologies to make your applications more portable, scalable, reliable and deployable.

Session #107 @ FLATIRONS (2ND FLOOR) : Architecting Big Data Solutions by Michael Carducci
This session covers the landscape of Big Data tools, technologies and best practices in 2018. You’ll leave this session armed with the knowledge you need to build Big Data solutions by assembling the best technologies for you.

Session #108 @ LONG’S PEAK (2ND FLOOR) : What’s new in JavaScript (ES 2019) - Part II by Raju Gandhi
JavaScript will celebrate it’s 23rd birthday in 2019. For a language that has been around for such a while it has seen very few, if any changes to the language itself. Well all that is about to change with ECMAScript.next (or ECMAScript 6). ECMAScript 6 modernizes JavaScript syntax, while bringing in features such as modules for better namespaces, class as a first class construct, and a variety of additional operators thus ensuring that JavaScript is ready for the next era of large scale modern web applications. ES 7, 8, 9 and now 10 all use the features introduced by ES6 to further the language.

12:30 - 1:30 PM : LUNCH - WESTMINSTER BALLROOM
1:30 - 3:00 PM - Sessions

Session #109 @ WESTMINSTER I-II : Microservices Caching Strategies by Mark Richards
Have you ever wondered how to share data between microservices? Have you ever wondered how to share a single database schema between hundreds (or even thousands) of microservices (cloud or on-prem)? Have you ever wondered how to version relational database changes when sharing data in a microservices environment? If any of these questions intrigue you, then you should come to this session. In this session I will describe and demonstrate various caching strategies and patterns that you can use in Microservices to significantly increase performance, manage common data in a highly distributed architecture, and even manage data synchronization from cloud-based microservices. I’ll describe the differences between a distributed and replicated cache, Using live coding and demos using Hazelcast and Apache Ignite, I’ll demonstrate how to share data and also how to do space-based microservices, leveraging caching to its fullest extent.

Session #110 @ WESTMINSTER III-IV : Essential Spring Security by Craig Walls
In this session, you’ll learn how to take advantage of the latest features of Spring Security and Spring Boot to secure an application, both at the web layer and at the method-level.

Session #111 @ LAKEHOUSE : Machine Learning: Overview by Brian Sletten
Machine Learning is a huge, deep field. Come get a head start on how you can learn about how machines learn.

Session #112 @ STANDLEY I : Docker for Devs Workshop by Christopher Judd
Docker and containers are getting a lot of attention these days but what do they mean for devs? How do they fit into DevOps and continuous delivery movements? Where do these tools fit into cloud computing? During this hands-on session we will learn how to install and configure Docker, build images and run containers in a local development environment. But we will also explore using them in a continuous deployment environment by deploying them to on premise as well as cloud services such as AWS.

Session #113 @ STANDLEY II : Improving Quality of JavaScript Code by Venkat Subramaniam
JavaScript is a very powerful and ubiquitous language. At the same time, it is also a language that is often misunderstood and misused. Better quality code greatly reduces the effort and time to maintain software. So, there is a good incentive to improve quality of code.

Session #114 @ MEADOWBROOK : Documenting and Presenting Software Architectures by Neal Ford
This session covers two critical soft skills for architects: * creating clear, concise documentation of software architecture, both structure and decisions * presenting architectural ideas as clearly as possible

Session #115 @ COTTON CREEK I : Kotlin: Safe, Pragmatic Interoperability on the JVM by Kenneth Kousen
Kotlin is a practical language designed for the JVM. It focuses on pragmatism and safety, with an emphasis on interoperability and tool support. Kotlin is statically typed and includes null checks in the type system itself. The language runs anywhere Java does, from microservices to Android apps. This workshop will show how to use Kotlin to simplify anything you originally planned to do in Java.

Session #116 @ COTTON CREEK II : Creating an Environment for Successful Team by Esther Derby
Some teams seem to have some mysterious chemistry from the beginning. Other teams wallow, bicker, and slog their way to uncertain results. What makes one team soar, and another stumble? It’s not just chance. In this session, we’ll explore the essential ingredients that result in that mysterious “chemistry.” For example, we’ll examine the prerequisites for cohesion, and factors that pull teams apart. We’ll look at myths and realities of software teams. You’ll gain tools to assess your agile team, and insights on how to adapt the
environment for growing great teams. Learning Outcomes: Identify the essential elements for great teams. Strategies to adapt the environment to improve the chance of team success. Identify common pitfalls for agile teams.

Session #117 @ WINDSOR : Unveiling Kafka and Streaming by Daniel Hinojosa
Kafka has captured mindshare in the data records streaming market, and in this presentation, we knock on its door and see what lies behind. What is the draw? What makes it an attractive addition? How does it compare to Message Queues and other message streaming services?

Session #118 @ WAVERLY : Hack proof security by Brian Pontarelli
This talk covers security at each level: server, database, and application. I cover how to secure a Linux server, secure the database, and finally to secure the application.

Session #119 @ FLATIRONS (2ND FLOOR) : Diving into Big Data and Hadoop I by Michael Carducci
Big Data is exploding into our industry and these skills are increasingly in demand. Much of our existing body of knowledge needs to be updated, however as Big Data solutions present a number of unique challenges. In this half-day workshop we start with the question "What is Big Data?" and "How do big data solutions differ from traditional data architectures." We then dive into core Hadoop technologies to tackle your Big Data challenges and dive into several tools and technologies for distributed processing of large datasets.

Session #120 @ LONG'S PEAK (2ND FLOOR) : Reactive applications with Vert.x by Raju Gandhi
We live, and operate in a world where our services do not need to be available 24/7, but also respond to surges in demand, and scale down when demands are less. Reactive systems, and reactive architectures have arisen to address this very concern. Vert.x is a polyglot toolkit that makes writing reactive applications on the JVM possible. With a non-blocking, event driven architecture, Vert.x can help you scale your application, leveraging the multi-threaded nature of the JVM, and the multi-core abilities of your hardware.

3:00 - 3:15 PM : BREAK

3:15 - 4:45 PM - Sessions

Session #121 @ WESTMINSTER I-II : Applying Reactive Architecture Patterns by Mark Richards
Reactive architecture patterns allow you to build self-monitoring, self-scaling, self-growing, and self-healing systems that can react to both internal and external conditions without human intervention. These kind of systems are known as autonomic systems (our human body is one example). In this session I will show you some of the most common and most powerful reactive patterns you can use to automatically scale systems, grow systems, and self-repair systems, all using the basic language API and simple messaging. Through code samples in Java and actual run-time demonstrations, I'll show you how the patterns work and also show you sample implementations. Get ready for the future of software architecture - that you can start implementing on Monday.

Session #122 @ WESTMINSTER III-IV : Authentication as a Microservice by Brian Pontarelli
This talk discusses the progression from a monolithic application, where the application and user data are in the same database, to a microservice architecture, where the application and user data are in separate databases.

Session #123 @ LAKEHOUSE : Machine Learning: Natural Language Processing by Brian Sletten
Documents contain a lot of information. We'll introduce you to a variety of techniques to extract them.

Session #124 @ STANDLEY I : Docker for Devs Workshop (continued) by Christopher Judd
Docker and containers are getting a lot of attention these days but what do they mean for devs? How do they fit into DevOps and continuous delivery movements? Where do these tools fit into cloud computing? During this hands-on session we will learn how to install and configure Docker, build images and run containers in a local development environment. But we will also explore using them in a continuous deployment environment by deploying them to on premise as well as cloud services such as AWS.

Session #125 @ STANDLEY II : JavaScript: The Fascinating Parts by Venkat Subramaniam
JavaScript is no longer that scary nasty language. There are so many wonderful features in the modern versions of this language that I can't stop praising it. In this presentation we will focus on some of the most exciting features of the language that make programming in JavaScript a pleasant experience.

Session #126 @ MEADOWBROOK : Hypothesis/Data Driven Development using Feature Toggles by Neal Ford
Hypothesis and data driven development lies together current thinking about requirements, Continuous Delivery, DevOps, modern architecture, and engineering techniques to help rethink building software.
Session #127 @ COTTON CREEK I : Kotlin: Safe, Pragmatic Interoperability on the JVM (continued) by Kenneth Kousen
Kotlin is a practical language designed for the JVM. It focuses on pragmatism and safety, with an emphasis on interoperability and tool support. Kotlin is statically typed and includes null checks in the type system itself. The language runs anywhere Java does, from microservices to Android apps. This workshop will show how to use Kotlin to simplify anything you originally planned to do in Java.

Session #128 @ COTTON CREEK II : Creating an Environment for Successful Team (continued) by Esther Derby
Some teams seem to have some mysterious chemistry from the beginning. Other teams wallow, bicker, and slog their way to uncertain results. What makes one team soar, and another stumble? It's not just chance. In this session, we'll explore the essential ingredients that result in that mysterious “chemistry.” For example, we'll examine the prerequisites for cohesion, and factors that pull teams apart. We'll look at myths and realities of software teams. You'll gain tools to assess your agile team, and insights on how to adapt the environment for growing great teams.
Learning Outcomes: Identify the essential elements for great teams. Strategies to adapt the environment to improve the chance of team success. Identify common pitfalls for agile teams.

Session #129 @ WINDSOR : Beginning Spark by Daniel Hinojosa
Apache Spark is the fast data processing of large document stores and databases. Spark is highly distributed, optimized, and redundant for large clustering manipulation and aggregation.

Session #130 @ WAVERLY : VueJS [1]: A 50,00 foot Vue! Getting started with VueJS by Peter Pavlovich
Vue is a new, powerful framework for building real-world applications. Enterprise ready, with a rich and diverse ecosystem, Vue is the currently ranked as the #2 front end framework and is rapidly gaining on its older brother, ReactJS. Join us for this first in a comprehensive series of session which will take you from blind novitiate to visionary VueJS expert in no time!

Session #131 @ FLATIRONS (2ND FLOOR) : Diving into Big Data and Hadoop II by Michael Carducci
Big Data is exploding into our industry and these skills are increasingly in demand. Much of our existing body of knowledge needs to be updated, however as Big Data solutions present a number of unique challenges. In this half-day workshop we start with the question "What is Big Data?" and "How do big data solutions differ from traditional data architectures." We then dive into core Hadoop technologies to tackle your Big Data challenges and dive into several tools and technologies for distributed processing of large datasets.

Session #132 @ LONG'S PEAK (2ND FLOOR) : GOLD - An Open Source Dynamic Domain Service by Earl Nolan
Creating new domain objects in a microservice architecture can result in the following quandry: should an existing service be augmented or should a new service be created. When the objects do not fit within existing services, this results in having pico services, many trivial services to support the new domain objects.

4:45 - 5:00 PM : BREAK
5:00 - 6:30 PM - Sessions

Session #133 @ WESTMINSTER I-II : Streaming Architecture Using Kafka (UberConf) by Mark Richards
There are many different uses for Apache Kafka. It can be used as a streaming broker, event broker for transactional data, and even a database. This session is about understanding streaming architecture and how to implement it using Apache Kafka. I start this session by talking about some of the streaming architecture patterns, then dive into how Apache Kafka works using the Core API. Using live coding examples in Apache Kafka, I also talk about the differences between Kafka and regular messaging (RabbitMQ, ActiveMQ, etc.) and when you should use each. I end this session by putting everything together, showing an actual streaming architecture using Kafka within a Microservice ecosystem for gathering various metrics for business and operational monitoring and reporting.

Session #134 @ WESTMINSTER III-IV : Identity in your Microservice Architecture by Brian Pontarelli
As your organization changes from a monolithic architecture to microservices, or you are looking at what this type of change requires, a key component to consider is identity and user management.

Session #135 @ LAKEHOUSE : Machine Learning: TensorFlow by Brian Sletten
This open source machine learning framework from Google has taken off. Come learn what you can do with it in your own organization.

Session #136 @ STANDLEY I : MongoDB Patterns, Pitfalls, and Best Practices by Michael Carducci
Interest in MongoDB and other NoSQL platforms has waxed and waned over the years, however, Mongo remains an enormously useful tool. In this session, you will learn everything you need to know to master MongoDB.
Session #137 @ STANDLEY II : JavaScript: From Classes to Decorators by Venkat Subramaniam
To say the least, writing classes in JavaScript was a weird experience. It never felt right. Well the language has set it right finally. In this presentation we will learn about the different capabilities in JavaScript to do OO programming. Along the way we will dive into some advanced concepts as well.

Session #138 @ MEADOWBROOK : Build Your Own Technology Radar Workshop for Architects by Neal Ford
A Technology Radar is a tool that forces you to organize and think about near term future technology decisions, both for you and your company. This talk discusses using the radar for personal breadth development, architectural guidance, and governance.

Session #139 @ COTTON CREEK I : Pattern Matching Makes You Powerful! (In All Languages!) by Danny Brian
Regular Expressions are an undervalued, underutilized tool in the developer toolbox. Few programming technologies have stood a comparable test of time for their capacity to improve developer productivity, to shortcut complex tasks, to reduce dependency on various libraries, and to encourage code reuse. They also help to teach patterns and improve pattern recognition, not only for code, but for programmers themselves. Competency with regexes will make you a better programmer, regardless of your choice of language or platforms. And it will impress your peers, too!

Session #140 @ COTTON CREEK II : Engineering Feedback Loops by Arty Starr
Science is a systematic process of engineering feedback loops that help you learn. This learning isn't arbitrary. In science, we're on a mission to _discover useful clues_ that help us understand a system. Whether that system is a product we're trying to design, a process we want to improve, or an application we're trying to understand -- the art of engineering feedback loops still applies.

Session #141 @ WINDSOR : Spark Streaming by Daniel Hinojosa
Spark Streaming is one of the few additions that are available with Spark that uses its internal architecture and creates a Streaming processing framework to process data in real time.

Session #142 @ WAVERLY : Gradle In Depth by Kenneth Kousen
Gradle is the build tool of choice in the open source world, and rapidly becoming the standard in industry as well. Anyone who works with Gradle on a Java project knows the basics of the Java plugin and how to write simple tasks in Groovy. Gradle can do much more, however. This talk will demonstrate how to write your own custom task classes and how to create Gradle plugins from them. Other Gradle features will be demonstrated as well, including file manipulation, incremental builds, generating the Grade wrapper, and resolving conflicts in dependencies.

Session #143 @ FLATIRONS (2ND FLOOR) : VueJS [2]: Gazing deeper: Getting a better Vue of VueJS by Peter Pavlovich
Vue is a new, powerful framework for building real-world applications. Enterprise ready, with a rich and diverse ecosystem, Vue is currently ranked as the #2 front end framework and is rapidly gaining on its older brother, ReactJS. Join us for this second in a comprehensive series of session which will take you from blind novitiate to visionary VueJS expert in no time!

Session #144 @ LONG'S PEAK (2ND FLOOR) : Developers on pager duty by Ann Mwangi
In the past, the software development process was divided into various stages, from the business defining the requirements, then the developers building the software, then the testers test it to ensure that there are no bugs in the application, then it is passed over to the operations team who release it to production and a support team to maintain it. Over time the process has been changing to accommodate feedback to each stage of the software lifecycle and release software faster by bringing the team to work collaboratively and make it less of a staged process. A part of this improvement, a devops culture has emerged where the developers and the operations team work together in the development and deploying the application. This in itself has brought up a lot of challenges while still leaving the technical support of the application to another team, who did not develop it.

6:30 - 7:30 PM : DINNER - WESTMINSTER BALLROOM
7:30 - 8:30 PM : UBERCONF 2018 PANEL DISCUSSION
8:30 - 9:00 AM : TECH TRIVIA SHOW - WIN PRIZES - JOIN US!!

Friday, Jul. 20
8:00 - 9:00 AM : BREAKFAST - WESTMINSTER BALLROOM
9:00 - 10:30 AM - Sessions
Session #145 @ WESTMINSTER I-II : Towards an Evolutionary Architecture and Design by Venkat Subramaniam
Big up front design is discouraged in agile development. However, we know that architecture plays a significant part in software systems. Evolving architecture during the development of an application seems to be a risky business.

Session #146 @ WESTMINSTER III-IV : Analyzing Software Architecture by Mark Richards
One of the expectations of any software architect is to analyze the current technology environment and recommend solutions for improvement. This is otherwise known as continually assessing architecture vitality. Too many times software architects fail to regularly perform this task, leading to emergency refactoring efforts to save a troubled system from failure. The question is, what does it mean to assess an application architecture? In this session we will explore static analysis metrics and tools and techniques for leveraging those metrics for determining structural decay. Using a real-world large-scale application, I'll show you how to leverage code metrics to find (and fix) structural decay before it gets you into trouble.

Session #147 @ LAKEHOUSE : Reactive Architectures: Implementation Strategies for Enterprise Applications Workshop by Peter Pavlovich
The end has come. REST is finally dead. The world of reactive data sources has killed it, and your users will be forever grateful. Gone from your applications are 'Refresh' buttons. Gone from your sever code are the polling routines, pinging remote services for changes. Customers dashboards update seamlessly and in real time. Your users have never been happier. If this sounds like a world that you want to live in, join us for this awesome workshop exploring the various options available to the enterprise architect when designing and implementing the reactive software layers and constructs necessary to make this dream a reality today!

Session #148 @ STANDELY I : Understanding Kubernetes: Fundamentals by Jonathan Johnson
So you have some code and it is in a bounded context with a REST API. You are on your way to Microservices. Next you wrap it in a container and now it is an image that others can run. Simple. Now what? No service is an island. Your service needs to log information, needs to scale and load balance between its clones. Your service needs environment and metadata way outside its context. What about where the service will run? Who starts it? What monitors its health? What about anti-fragility? Updates? Networking? Oh my! Services live in clusters and clusters live in data centers. Many concepts overlap with the features of cloud management. But don't get too flustered since, fundamentally, services are managed by clusters. There are several approaches to cluster management such as Docker Swarm, Mesos with Marathon and Kubernetes.

Session #149 @ STANDELY II : Firebase (AngularFire, ReactFire) by Christina Kayastha
Firebase is a powerful set of tools to build out your application without having to manage infrastructure!

Session #150 @ MEADOWBROOK : Pipelines-as-a-Code with Jenkins 2+ by Raju Gandhi
We developers really like code. Code, being plain-text, can be version-controlled, versioned, and follow a traditional SDLC lifecycle. For the longest time however, we were forced to live with having most of our CI/Cd and server configurations live outside of our codebases, often at the mercy of infrastructure/operations teams. With the evolution of DevOps comes the notions of constructs like IaasC (Infrastructure-AS-A-Code), and with Jenkins 2.0, we can now manage our Jenkins jobs configurations as code!

Session #151 @ COTTON CREEK I : Business driven cloud architecture by Ann Mwangi
As the cloud becomes more popular, many cloud-experienced architects wonder whether migration to the cloud is the correct way to scale. When they decide to migrate they have to figure out where to start from and which components to use. This talk is not about a particular cloud vendor but the questions and considerations to take while deciding on a cloud architecture for your business. After deciding to migrate to the cloud, the architecture design will determine the success rate of the infrastructure. This architecture needs to be robust and well thought of to ensure that it handles all the requirements at hand and flexible enough for the future.

Session #152 @ COTTON CREEK II : Test Harnessing Legacy Infrastructure by Arty Starr
In the world of legacy code, we often end up inheriting a tangled ball of mess with a lack of automation, and no clear surfaces for testing. Yet still, under these circumstances, we're expected to safely make changes without regressions. Where do we start? How do we tackle this challenge? How do we get a handle on re-architecture? We'll start this discussion with a first-hand use case and example -- tackling the re-architecture of an 800k line JBoss application with near-zero unit tests. Ugh. The only option on the table was Selenium. UGH. Let's talk about alternative strategies. How have you tackled similar situations? How could we build a data-driven regression framework without going through the UI?

Session #153 @ WINDSOR : Build Modular, Standards-Based Progressive Web Apps by Danny Brian
Web Components change the way you build web applications and think about front-end architecture. Finally, web developers have a sane way to scope and modularize not just their JavaScript, but also the HTML5 and styling. The approach is elegant, encourages compatibility between frameworks, and piggybacks on the web browser's success as an open and extensible runtime. The Polymer framework demonstrates how frameworks can and should evolve in a Web Components world.

Session #154 @ WAVERLEY : Building a Front end Pipeline by Nathaniel Schutta
Back in the day, it used to be so simple. Our projects had a main.js file that contained a few hundred lines and every so often the corporate communication department would ship out some new CSS files. But now things are not quite so easy. With more and more single page apps containing thousands or hundreds of thousands of lines of JavaScript, we're going to need a bigger boat.
Session #155 @ FLATIRONS (2ND FLOOR) : Electron : Cross-Platform Desktop Apps Meet the Web by Brian Sletten
For the last 20-30 years, there has been a never-ending set of solutions for building cross-platform desktop applications. Most of them suck. Electron is one that doesn't. It is a new solution that forms the basis of the Atom Editor, Microsoft's Visual Studio Code, the Slack app and more. Come see what happens when you combine the best of the Web, Node.js and Chromium to provide attractive, modern, flexible, useful, consistent cross-platform desktop applications.

Session #156 @ LONG'S PEAK (2ND FLOOR) : The Elm Language Workshop by Daniel Hinojosa
A wonderful workshop adventure with a wonderful language on the client side. Entirely written in JavaScript it is meant as a wholesale replacement on the front end. Derived from Haskell, Elm is fast, elegant, and concise. Elm also hides much of the complexities away including side effect management, event management, and exception handling where the programmer, the happy programmer might I add just focuses on the core.

10:30 - 10:45 AM : MORNING BREAK
10:45 - 12:15 PM - Sessions

Session #157 @ WESTMINSTER I-II : Core Software Design Principles by Venkat Subramaniam
Creating code is easy, creating good code takes a lot of time, effort, discipline, and commitment. The code we create are truly the manifestations of our designs. Creating a lightweight design can help make the code more extensible and reusable.

Session #158 @ WESTMINSTER III-IV : Creating Enterprise Architecture Roadmaps by Mark Richards
While there are dozens of activities within an enterprise architecture effort, there is only one primary outcome - an enterprise architecture roadmap. Roadmaps describe what efforts (i.e., projects) need to be done to meet a specific objective, the dependencies between those efforts, and the prioritization of those efforts. In this session I'll cover the four main models that make up an EA roadmap and show you techniques for how to identify projects, classify projects, prioritize projects, and finally illustrate these efforts through consolidated roadmap views. By the end of this session you'll have a clear view of why enterprise architecture is needed, the purpose behind it, and how to create an effective and clear enterprise architecture roadmap.

Session #159 @ LAKEHOUSE : Reactive Architectures: Implementation Strategies for Enterprise Applications Workshop (continued) by Peter Pavlovich
The end has come. REST is finally dead. The world of reactive data sources has killed it, and your users will be forever grateful. Gone from your applications are 'Refresh' buttons. Gone from your sever code are the polling routines, pinging remote services for changes. Customers dashboards update seamlessly and in real time. Your users have never been happier. If this sounds like a world that you want to live in, join us for this awesome workshop exploring the various options available to the enterprise architect when designing and implementing the reactive software layers and constructs necessary to make this dream a reality today!

Session #160 @ STANDLEY I : Understanding Kubernetes: Container Patterns by Jonathan Johnson
Prerequisite: If you are unfamiliar with Kubernetes be sure to attend: Understanding Kubernetes: Fundamentals Aha moments with apps in containers can be quite liberating. The mobile space is saturated with "there's an app for that". For us, we now expect "there's a container for that". "Write once, run anywhere" (WORA) has changed to "Package once, run anywhere" (POR). As the community of containers is riding up the hype curve we will look at some of those top aha moments together. • Go rouge with Java 9 and jlink • Polyglot microservices • RabbitMQ broker in 2 minutes • Private Docker hub in a container • Composing a Pod with multiple containers • Database flavors for integration testing The epiphanies come from the modular simplicity. Leveraging namespaces and using cgroups, these apps share a common kernel without polling the host OS. This simplifies installation, conflicts and uninstalls. The barriers to getting something running are decreased and normalized to a container run command. This is subtly powerful and liberating. With this simplicity comes complexity such as shared resources, file systems, mounts, networking and overall cluster management.

Session #161 @ STANDLEY II : Managing State with Redux (NgRedux, ReactRedux) by Christina Kayastha
State management is essential in large scale Single Page Applications-it helps keep code easy to learn and debug.

Session #162 @ MEADOWBROOK : Evolutionary Tales of an API by Earl Nolan and Arash Shokoufandeh
How do you build an API that isn't obsolete as soon as it goes live? This Lessons from the Field talk will take you on our 8 year journey culminating with the current rollout of api.nfl.com.

Session #163 @ COTTON CREEK I : How secure is your cloud? by Ann Mwangi
As Cloud computing becomes more popular and many businesses are keen to adopt it, one of their major concerns is security. In spite of the hype accompanying it and the success stories from the large organisations who have adopted, there are also numerous examples of breaches that have been experienced in the cloud. Many businesses would like to know how to create a secure cloud infrastructure to ensure that all their applications and data is well protected. This talk is based on my experience in different projects that I have been involved in, some pitfalls that my team has fallen into and considerations that we can take while preparing for new cloud infrastructure.
Session #164 @ COTTON CREEK II : Test Automation Disasters by Arty Starr
How much time have you spent automating tests, then discovered the tests were mostly useless, brittle, time-consuming, and hard to understand? How many times have you deleted everything, started over, and came with a substantially better strategy for next time? In this session, we'll dig into one disaster story at a time, explore the nuts & bolts, then distill lessons learned and improvement ideas.

Session #165 @ WINDSOR : Build Modular, Standards-Based Progressive Web Apps (continued) by Danny Brian
Web Components change the way you build web applications and think about front-end architecture. Finally, web developers have a sane way to scope and modularize not just their JavaScript, but also the HTML5 and styling. The approach is elegant, encourages compatibility between frameworks, and piggybacks on the web browser's success as an open and extensible runtime. The Polymer framework demonstrates how frameworks can and should evolve in a Web Components world.

Session #166 @ WAVERLY : Production Hardened Services by Nathaniel Schutta
By now I bet your company has hundreds, maybe thousands of services, heck you might even consider some of them micro is stature! And while many organizations have plowed headlong down this particular architectural path, your spidey sense might be tingling...how do we keep this ecosystem healthy?

Session #167 @ FLATIRONS (2ND FLOOR) : WebAssembly Workshop by Brian Sletten
What happens if Web applications become super fast? What if the ability to write code once but run it on lots of different platforms was true again? What if Desktops are no longer interesting because you can do everything in a browser? What if JavaScript wasn't your only language choice? These are all starting to happen now that this W3C Standard is supported widely across all major browser vendors, Node and more. It's never been a better time to dig into the future that is playing out now faster than most people realize.

Session #168 @ LONG'S PEAK (2ND FLOOR) : The Elm Language Workshop (continued) by Daniel Hinojosa
A wonderful workshop adventure with a wonderful language on the client side. Entirely written in JavaScript it is meant as a wholesale replacement on the front end. Derived from Haskell, Elm is fast, elegant, and concise. Elm also hides much of the complexities away including side effect management, event management, and exception handling where the programmer, the happy programmer might I add just focuses on the core.

Session #169 @ WESTMINSTER I-II : Build Stunning User Interfaces by Christina Kayastha
Are you an engineer and not a designer?Are you too busy to waste time on styling components and making sure your css applies across all browsers? Do you need to rapidly build prototypes and iterate on the UI quickly? Then this talk is for you!

Session #170 @ WESTMINSTER III-IV : Bootiful Development with Spring Boot and React by Matt Raible
To simplify development and deployment, you want everything in the same artifact, so you put your React app "inside" your Spring Boot app, right? But what if you could create your React app as a standalone app and make cross-origin requests to your API? A client app that can point to any server makes it easy to test your current client code against other servers (e.g. test, staging, production). This session shows how to develop with Java 8, Spring Boot, React, and TypeScript. You'll learn how to create REST endpoints with Spring MVC, configure Spring Boot to allow CORS, and create an React app to display its data. If time allows we'll cover authentication with OpenID Connect and deployment to Cloud Foundry.

Session #171 @ LAKEHOUSE : "Alexa, Make Me Rich!": Smart speaker and BOT development workshop. by Peter Pavlovich
Engaging your users has never been more important than it is today. Competition for user attention is fierce and ruthless. There are new players on the field, however, that are changing the competitive landscape: Smart Speakers and Internet Robots BOTs provide channels to engage and interact with your users in amazing new ways that we never before thought possible. Join us for this deep dive into the technologies, architectural and design patterns you will need to be successful in this new space. This is a hands-on workshop in which we will develop, deploy and secure test a number of fully functional applications and experiment engaging with them using Alexa, Google Home, Facebook Messenger and other user engagement channels.

Session #172 @ STANDELEY I : Understanding Kubernetes: Testing Patterns by Jonathan Johnson
Prerequisite: If you are unfamiliar with Kubernetes be sure to attend: Understanding Kubernetes: Fundamentals. Highly cohesive and loosely coupled business functions can have a great impact on your agility to deliver new features. Microservices in containers is an effective implementation detail for continuous delivery. However, before you bite into that big sandwich, consider how provisioning a variety of data flavors as containerized endpoints could greatly improve your internal testing. How many times have you heard a colleague say, "Well that feature does not have integration tests because it requires a database with some specialized data"? Balderdash - put your data flavors in containers! Let's explore a solution to create a pipeline of data flavors. We use Docker images, Kubernetes Pods, Minikube to provision these endpoints. See how a Gradle project drives integration tests against these Pod
endpoints, all ready for your continuous integration pipeline. In the end you can see the power of Consumer Driven Contracts against your dataset flavors.

**Session #173 @ STANDLEY II : Measuring Quality of design (1/2 day workshop) by Venkat Subramaniam**

Before spending substantial effort in refactoring or altering design, it would be prudent to evaluate the current quality of design. This can help us decide if we should proceed with refactoring effort or a particular alteration of design. Furthermore, after evolving a design, using some design metrics would help us to evaluate if we have improved on the design front.

**Session #174 @ MEADOWBROOK : Enterprise Architecture Approaches and Strategies by Mark Richards**

There are many traditional approaches to enterprise architecture. Unfortunately, these traditional approaches are one of the reasons EA fails in today's world. In the first part of this session I'll describe and demonstrate the traditional approaches to EA, explain why they fail, and then show you several modern approaches to enterprise architecture that hold lots of promise in transforming EA to the 21st century. In the second part of this session I'll then describe 4 different enterprise architecture strategies for overall EA team structure, governance, process, and standards.

**Session #175 @ COTTON CREEK I : Hacking &amp; Hardening Java Web Applications Workshop by Christopher Judd**

It seems like everyday there is a new headline about a security breach in a major company’s web application. These breaches cause companies to lose their credibility, cost them large sums of money, and those accountable undoubtedly lose their jobs. Security requires you to be proactive. Keep your employer out of the headlines by learning some key security best practices.

**Session #176 @ COTTON CREEK II : Communication for Architects by Nathaniel Schutta**

At the end of the day, an architect’s primary job is to communicate. Not only do we need to make sure our teams understand the design of the system well enough to implement it, we must be able to explain our decisions to an audience that isn’t impressed with how many TLAs you can rattle off in one sentence. Successful architects need to seamlessly transition from in depth technical conversations to budget meetings to discussions with end users adjusting the message to fit the audience.

**Session #177 @ WINDSOR : Foundational Front-End Architecture: Getting the Most out of Frameworks, Libraries, Events, and the Browser Platform (Without Losing Your Mind) (continued) by Danny Brian**

"There's a new JS framework every week! There's a new JavaScript feature every week! There's a new HTML5 feature every week! We are losing our minds OMG@#HELPUS!" Settle down everybody. Shiny new frameworks distract you from the stability offered by the web platform: ES6 is the first major update to JavaScript since 2009, and HTML5 was 18 years in the making! More importantly, few of these innovations significantly change the "architecture" of web applications — we owe browser innovation and frameworks for that. But since the browser evolved in to a full-blown application runtime, we now need solid front-end architecture, and front-end architects. It's not just about JavaScript, it's about the entire browser platform. And you can't pick frameworks to simplify that platform until you understand its underpinnings.

**Session #178 @ WAVERLY : Scala for Java Developers (1/2) (Laptops Optional) by Daniel Hinojosa**

Scala for Java Developers is a full live code and fast paced presentation and workshop (laptops optional), and this is all about the Scala language.

**Session #179 @ FLATIRONS (2ND FLOOR) : WebAssembly Workshop (continued) by Brian Sletten**

What happens if Web applications become super fast? What if the ability to write code once but run it on lots of different platforms was true again? What if Desktops are no longer interesting because you can do everything in a browser? What if JavaScript wasn't your only language choice? These are all starting to happen now that this W3C Standard is supported widely across all major browser vendors, Node and more. It's never been a better time to dig into the future that is playing out now faster than most people realize.

**Session #180 @ LONG'S PEAK (2ND FLOOR) : Putting Out Fires with Gasoline by Arty Starr**

Once upon a time, it was just me and my app -- the days when all I had to know was "get data, put on screen." Fast forward ten years later, and what the hell happened? The level of complexity that we deal with in modern software development is insane. Are we really better off than we were 10 years ago, or have we just been putting out our fires with gasoline?

3:00 - 3:15 PM : AFTERNOON BREAK
3:15 - 4:45 PM - Sessions

**Session #181 @ WESTMINSTER I-II : Customer Centered Development by Christina Kayastha**

Every company in today's day and age wants to build rapidly and deliver value to their customers sooner. But often we develop in a vacuum and consult our end user too late in the process.
Session #182 @ WESTMINSTER III-IV : What the Heck is OAuth and Open ID Connect? by Matt Raible

OAuth is not an API or a service: it is an open standard for authorization and any developer can implement it. OAuth is a standard that applications can use to provide client applications with “secure delegated access”. OAuth works over HTTP and authorizes Devices, APIs, Servers and Applications with access tokens rather than credentials, which we will go over in depth below. OpenID Connect (OIDC) is built on top of the OAuth 2.0 protocol. It allows clients to verify the identity of the user and, as well as to obtain their basic profile information.

Session #183 @ LAKEHOUSE : &quot;Alexa, Make Me Rich!&quot; Smart speaker and BOT development workshop. (continued) by Peter Pavlovich

Engaging your users has never been more important than it is today. Competition for user attention is fierce and ruthless. There are new players on the field, however, that are changing the competitive landscape: Smart Speakers and Internet Robots (Bots) provide channels to engage and interact with your users in amazing new ways that we never before thought possible. Join us for this deep dive into the technologies, architectural and design patterns you will need to be successful in this new space. This is a hands-on workshop in which we will develop, deploy and secure a test a number of fully functional applications and experiment engaging with them using Alexa, Google Home, Facebook Messenger and other user engagement channels.

Session #184 @ STANDLEY I : Code Analysis and Team Culture by Jonathan Johnson

This is the droid you are looking for. The term “static code analysis” is a seemingly boring term for tools that harden your product and advance your team's engineering prowess. Within this droid are hundreds of rules designed to review your code for defects, hotspots and security weaknesses. Consider the resulting analysis as humble feedback from a personal advisor. The rules come from your community of peers, all designed to save your butt. We will explore techniques on how to add these checks to your IDE, your build scripts and your build pipelines.

Session #185 @ STANDLEY II : Measuring Quality of design (1/2 day workshop) (continued) by Venkat Subramaniam

Before spending substantial effort in refactoring or altering design, it would be prudent to evaluate the current quality of design. This can help us decide if we should proceed with refactoring effort or a particular alteration of design. Furthermore, after evolving a design, using some design metrics would help us to evaluate if we have improved on the design front.

Session #186 @ MEADOWBROOK : EA Frameworks: Comparing Zachman, TOGAF, and FEA by Mark Richards

Organizing and governing enterprise architecture models and processes is a daunting task. No wonder so many people are wondering whether an enterprise architecture framework will help. Understanding various enterprise architecture frameworks like Zachman, TOGAF, and FEA is the first step. More important, however, is knowing whether you need an EA framework at all. In this session I will start with the basics of the Zachman Framework, TOGAF (The Open Group Architecture Framework), and FEA (Federal Enterprise Architecture) so that you can gain a complete understanding of how each of these frameworks work. During the journey of these frameworks I will continually point out the strengths and weaknesses of each framework to arrive at the best part of the session - how to build your own EA Framework that works for you and your situation.

Session #187 @ COTTON CREEK I : Hacking & Hardening Java Web Applications Workshop (continued) by Christopher Judd

It seems like everyday there is a new headline about a security breach in a major company’s web application. These breaches cause companies to lose their credibility, cost them large sums of money, and those accountable undoubtedly lose their jobs. Security requires you to be proactive. Keep your employer out of the headlines by learning some key security best practices.

Session #188 @ COTTON CREEK II : GLiTR - GraphQL schema made easy by Arash Shokoufandeh

The GraphQL specification has been gaining traction at incredible speed but the need to define, and then maintain, a separate GraphQL schema can be a substantial barrier to entry. GLiTR is an open source framework developed at the NFL with the express purpose to help us bridge this gap.

Session #189 @ WINDSOR : Foundational Front-End Architecture: Getting the Most out of Frameworks, Libraries, Events, and the Browser Platform (Without Losing Your Mind) (continued) by Danny Brian

"There's a new JS framework every week! There's a new JavaScript feature every week! There's a new HTML5 feature every week! We are losing our minds OMG@$HELPUS!" Settle down everybody. Shiny new frameworks distract you from the stability offered by the web platform; ES6 is the first major update to JavaScript since 2009, and HTML5 was 18 years in the making! More importantly, few of these innovations significantly change the "architecture" of web applications — we owe browser innovation and frameworks for that. But since the browser evolved in to a full-blown application runtime, we now need solid front-end architecture, and front-end architects. It's not just about JavaScript, it's about the entire browser platform. And you can't pick frameworks to simplify that platform until you understand its underpinnings.
Session #190 @ WAVERLY : Scala for Java Developers (2/2) (Laptops Optional) by Daniel Hinojosa
Scala for Java Developers is a full live code and fast-paced presentation and workshop (laptops optional), and this is all about the Scala language. This is Part 2, continuing where we left off from Part 1.

Session #191 @ FLATIRONS (2ND FLOOR) : The Decentralized Web by Brian Sletten
While the Web itself has strong decentralized aspects to how it is used, the backend technologies are largely centralized. The naming systems, the routing systems and the traffic that all points back to the same place for a website are all centralized technologies. This creates both a liability as well as a control point. In order to break free of some of these limitations, new technologies are emerging to provide a more decentralized approach to the Web.

Session #192 @ LONG'S PEAK (2ND FLOOR) : Theory of Reality Construction by Arty Starr
Ready Player One. Welcome to the future of Augmented Reality. All physical limitations of what can exist around you, have now been lifted. In the world of AR, we can visualize anything we can dream... so dare to dream big. In this session, we'll break down the Matrix into a buildable software architecture model -- the algorithm of Life() expressed as a probabilistic Magnet Operating System. Next, we become Software Shaman responsible for shaping the metaphors and schemas that define the Oasis... welcome to the world of Reality Construction.

4:45 - 5:00 PM : CONCLUSION OF UBERCONF 2018 - THANK YOU FOR ATTENDING!