

CS294 Cutting-Edge Web Technologies

Overview

#wt294

Teaching Team



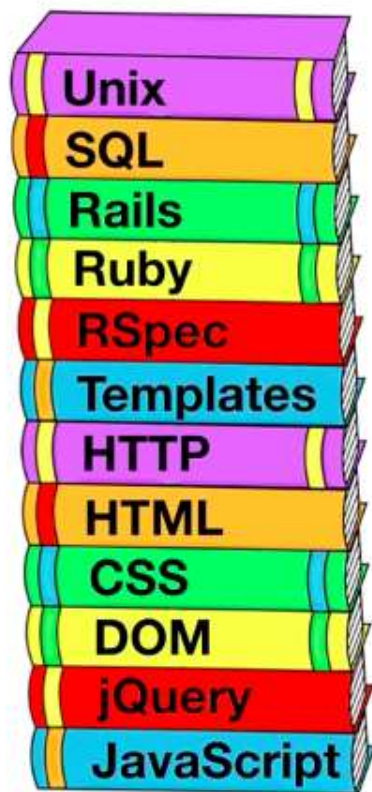
@dawnsongtweets



@mitar_m

And invited technology leaders from the industry





Unix

SQL

Rails

Ruby

RSpec

Templates

HTTP

HTML

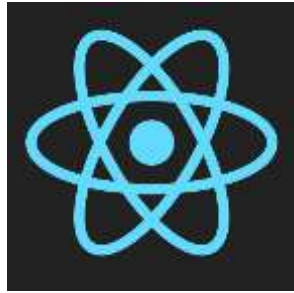
CSS

DOM

jQuery

JavaScript

What's Your Favorite Web Technology?



Dart

METEOR



socket.io

node.js



Firebase

What Is This Class About?

- New web technologies
 - What problems they try to address
 - Design choices
 - What design choices were made
 - Why were they made
 - Real-world lessons & experiences
 - Not tutorials

Goals of Class

- Learn trends in new web technology
 - Develop better apps
- Learn how to create new web technology
 - Help developers develop better apps

Topics Covered in Class (I)

- Reactive templating engines and frameworks
 - React.js, Meteor, Angular JS
- Real-time communication
 - Web sockets, node.js streams, WebRTC, socket.io
- ES6, new CSS, new DOM feature
 - Polymer, web components, shadow DOM, Flexbox
- Deployment and hosting
 - Heroku, Docker, Parse

Topics Covered in Class (II)

- System languages
 - Go, Rust, Scala, Erlang
- Concurrency & scaling
- Big data
 - Spark, map/reduce, many others
- UI/UX

Course Format

Course Units

- 1-3 units

Units	Blog post	Project
1	X	
2	X	Applications or new web technologies
3	X	Large project, new web technologies

Projects

- Scope
 - Build a web app with new web technology
 - Build new web technology
- Done in groups of three
 - Pick partners soon!
 - Group size of 2 or 4 also allowed

Project Schedule

- 2/15/2015 midnight: Project proposal due
- 3/15/2015 midnight: Milestone 1 report
- 4/19/2015 midnight: Milestone 2 report
- 5/6/2015 class time: Project screencast & demo
- 5/10/2015 midnight: Project report due

Blog (I)

- Weekly blog posts
 - Each project group does one blog post per week
 - Describe three key points you have learned about the technologies of the week
 - What problem they try to address
 - Strength
 - Weaknesses
 - How do relevant technologies compare with each other
 - Due the following Sunday midnight

Technology of the Week

- Technology covered in class
- Any related and/or similar technologies
 - Including the ones you find yourself

Blog (II)

- Summary blog posts
 - Each group writes three summary blog posts in the semester
 - Summarize a given week's blogs
 - Due one week after the due date of the relevant weekly blog
- Tumblr

Grading

- 20% class participation
- 35% blog posts
- 45% project (for 2 or 3 units)

Other Notes

- Piazza – Primary point of contact
- Waitlist

Next Steps

- Identify group partners
- Next lecture: Pete Hunt from React.js, Facebook

Q&A