CS294 Cutting-Edge Web Technologies

Overview

#wt294
Teaching Team

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And invited technology leaders from the industry
What’s Your Favorite Web Technology?
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**

<table>
<thead>
<tr>
<th>Units</th>
<th>Blog post</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>X</td>
<td>Applications or new web technologies</td>
</tr>
<tr>
<td>3</td>
<td>X</td>
<td>Large project, new web technologies</td>
</tr>
</tbody>
</table>
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