

Spring 2020

After Spring Break Restart

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Cloud Computing

- The grading methods need to change from before the break
- There is still a value to having frequent “*intense*” quizzes, but the assessment (wandering around in the classroom), no longer works
- (OK that is kinda obvious)
- In the past, as recently as last Summer, I tried other options
- Rather than walk around in class, students would either share a link to a cloud deployed application, where we could remotely try it out and grade it, or demo it
- There is really no reason to have separate parts of questions

Cloud Computing

- There is really no reason to have separate parts of questions, or separate parts, they can all be graded at one time
- ***We tried this***
- It was a horrible disaster!
- It was chaotic, unstructured, messy, and really horrible
- Even with 4 (***four***) GTAs, simultaneously!

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- So
- Lets try it again
- Maybe with some changes

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- The material (subjects) to be covered for the remainder of the class are:
- Two more cloud service providers (MicroSoft Azure and AWS), we can drop Google as a cloud provider, without much loss
- Visualization (nice pictures on the screen), “a picture is worth a bunch of words”
- Some simple “data mining” or “machine learning” (clustering)
- Scaling up (and down) instances and “***stress testing***”
- Some issues to discuss: security, design, QoS

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- The “***tentative***” schedule for the remainder of the class is:
- (this is subject to change, first we need to experiment with taking quizzes)
- March 30, quiz 0a, just to try out the new quiz method
- It won't count, it is an experiment
- Then, depending on result:
- Quiz 1 – April 1, then either {Q2-April 13, Q3-April 22, Q4-May 4} **or**
- Quiz 1 – April 1, then {Q2-April 20, Q3-May 4}

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- The quiz 0a will cover visualization.
- It will be similar to:
- Given the earthquake (or similar data set)
- Draw a bar chart with 5 vertical bars, with labels, for the count of earthquakes in the (Richter) range 1 to 2, 2 to 3, up to 5 and more.
- Draw a pie chart with the previous data
- Draw a scatter (or point) chart with 20 given (x, y) pairs
- All of these should be done with Javascript (packages)

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- The goal of this type of visualization is a “zero install” on the client, that is that the client does not need some local software installed
- Javascript is the “traditional” (easy) way to do so
- D3.js or one of the (many) derivatives work well, and are easy to use
- Javascript allows anyone with a connection and js on a browser to see the pretty pictures (tablets, phones, smart watches, glasses)

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- Cloud (remote) computing + DB + visualization + performance
 - (scaling, monitoring)
- Might get you a job
- Throw in a little “security”, maybe “Data Mining” and/or “Machine Learning” and you are a data scientist

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- Coming up next...