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CS 470

Professor Conlan

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Final Reflection

Final Presentation: https://youtu.be/uCetlLZtzAs

- How has this course helped me get closer to my professional goals?

CS 470 has gotten me closer to reaching my professional goal of becoming a full stack developer. Based on the career research I have done, Full Stack is a highly in demand specialization, as is the ability to build applications for cloud deployment. This course gave me a good understanding of some of the AWS services available and how to utilize them for an application. Given the market share of internet traffic that AWS controls, being able to work within their systems will be a huge benefit as I step into my career. Full Stack development also gave me a chance to realize that one of my strengths as a developer is the ability to map out and understand the architecture of an application. Be being able to understand how each piece of the puzzle fits together, I will be able to design more efficient and stable systems. I am currently in the process of searching for a job to change my career to software engineering and the roles I could take on are fairly varied. With the knowledge from this class, I feel confident I could work in both a back-end or front-end capacity, though I am more confident in my skill in the back-end.

- What knowledge have I gathered about cloud services?

Microservices are becoming ubiquitous in the industry and I believe we'll continue to see more applications migrate to the cloud as time goes on. By working within a serverless environment companies will not have to worry about their ability to scale or configuring the servers. The loss of customization between different companies' infrastructure does seem like it could be a potential security concern, if for instance one of the major serverless providers were to have a breach, but it seems that security is being taken extremely seriously by AWS and others. The benefit of being able to predict your costs and only pay for what is used is a huge benefit as well. This will allow smaller companies to provide applications that are just as competitive as larger companies in terms of accessibility and stability, without having to spend a fraction of the budget. AWS allows you to predict your costs based on current traffic trends and allows alerts when you are going to hit certain thresholds. This helps avoid overspending, or at least provides ample warning that you will be overspending.

The pros that would help you decide to expand your web application are straightforward. If your application is popular and generating a lot of traffic, an expansion will eventually be needed. This is the best scenario as whatever you built seems to be a hit. Another pro would be by expanding you could increase size or types of built-in services your application can offer. The biggest con for expanding would be the increased costs, but that is unavoidable. All these decisions can be made with the help of understanding elasticity and pay for use. By having elasticity in your services, you can meet demand when you need it but also not waste resources when demand is low. This couples with the pay for use model by paying more when your traffic, and hopefully ad revenue, sales, or donations, are higher and paying less for the same application when it is not being utilized as often. These two concepts coupled

together are helping to create an internet that is more accessible and helping spur on competition, at least by companies that need content hosted.