

CS 470 8-1 Assignment: Final Reflection

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Presentation Link: <https://www.youtube.com/watch?v=9c3lGKyOdQc>

Experience and Strengths

The two career fields that I am most interested in are full stack engineering and frontend web development. The skills I have learned in this course were incredibly beneficial to me in becoming a more marketable candidate for either career. Throughout this course, I learned how to apply full stack development principles to a serverless environment with AWS. I learned how to migrate a desktop application containing an Angular frontend, MEAN REST API backend, and mongo database to containers with the use of the Docker Engine to create and manage containers and Docker Compose to orchestrate those containers into one unit. I then migrated the application to the cloud, leveraging Amazon Web Services including S3, API Gateway, AWS Lambda, and Amazon DynamoDB to run my full stack application completely on the cloud. I even went a step further and implemented CloudFront to be able to run my site in multiple edge locations and CloudTrail to add logging for monitorization purposes. I also furthered my knowledge of how to secure a cloud application with AWS to prevent unauthorized access by implementing roles with a custom policy. Securing the connection between Lambda and the API Gateway, Lambda and the database, and S3 buckets were all prioritized as well.

As a software developer, my greatest strength is problem solving and understanding what tools I can use to solve a problem. I have learned various programming languages throughout my studies including C++, Java, Python, and JavaScript. I've worked with NoSQL databases including MongoDB and DynamoDB and have implemented frameworks like the MEAN stack to develop a web application with a REST API to be the middleman between the application and the database. While this is not an exhaustive list by any means, no matter what I have done so far, I am eager to learn more to ensure the success of any project I am apart of going forward.

Roles I am prepared to assume in a new job include frontend, backend, or full stack developer. Based on this class, I believe I would be interested in pursuing cloud development as well.

Planning for Growth

I have learned much about cloud services throughout my experience in Full Stack Development 2. I have learned that “serverless” refers to a cloud-native development model which allows developers to build and run applications without the potential headache of managing servers. Serverless includes other advantages as well including: elasticity to obtain resources as needed and release them if they are no longer required; pay-as-you-go to ensure you only pay for services required based on services consumed; no more guesswork required when it comes to infrastructure capacity with the ability to scale up or down at a moment’s notice; improved speed and agility due to being able to quickly access resources; and last but not least, global deployment in just minutes. Because of the pay-as-you-go approach of serverless, I believe it would be more cost effective than the use of containers because with containers, cloud providers would charge for server space even if the application is not being used. While expansion may seem enticing, it is important to understand the different regions require certain compliance and resources may be limited depending on where we plan to expand.