CS 470 Final Reflection

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https://youtu.be/iFzaFYVvb3k

Experiences and Strengths

This course was a valuable learning experience on my path to getting my Computer Science degree. I have learned of the different methods of shifting an application to the cloud and have further developed my skills when it comes to reading and comprehending documentation. As a software developer, some of my strengths are my methodical approach to development. I spent time planning and researching what needs created before I begin the process of coding. In addition, I make sure I understand what is happening in my code by performing multiple tests as I develop which allows me to debug issues with relative ease. I am now prepared to start my career as a Software Engineer for almost any type of application because of my ability to learn and adapt.

Planning for Growth

Microservices allows engineers to modularize their services for easier scaling and development. I would use a tool like Kubernetes to handle the scaling of my containers based on the traffic. I could also set-up error handling logic to log these messages for review and set up dashboards to monitor service health. Cost could be predicted for these applications based on the amount of CPU, RAM, and storage space that is used on a regular basis to run the application. This would allow me to budget out the necessary funds and prepare for the seasonal influx during holidays. When it comes to predicting cost between containers and serverless services I believe containers would be more predictable because you know you will only be charged while the container is up and running. For serverless services they may be called multiple times every time an operation calls the service.

There are several pros and cons when it comes to expanding your application to the cloud. Some pros being the flexibility and scalability of the cloud, The low cost to start running code, and the ease of use to quickly set up and run containers and services. Some cons include that over time it can get costly as your application expands in size. There is also limited control in the cloud because the cloud provider has a general level of control and there could be outages or updates. But overall, the elasticity of the cloud allows for your application to withstand almost any traffic flow due to it’s ability to expand the amount of containers being used. Finally, the cloud will always be a pay-for-service so this must be kept in mind as you commit to being fully cloud native. Every expansion will come at some cost, but it is the fastest way to get running and be accessible.