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June 20, 2024

CS 470 Final Reflection

<https://youtu.be/OP-qZ4jwois>

This course will help me reach my professional goals by helping me understand how cloud development works, and how the cloud works in general. By learning how different components are used together in order to create a functional application in the cloud, I will become a more marketable candidate in my field. As my biggest strength as a software developer is problem solving, it is important for me to learn the different possibilities when creating software. In a new job, I am prepared to assume roles where I am required to use databases, create functions that access databases, and consider security in a cloud application.

When handling scaling and error handling in an application, the use of containers would make these topics easier to approach. Containers make it easier to scale by allowing new containers to be added to the application. Error handling can also be made easier with the use of containers so that an error for one feature does not necessarily mean there will be errors in another. Fixing these issues also becomes easier as each container can be worked on independently and integrated when it is complete. When it comes to predicting the cost, determining how often and by how many people the application will be used by are both important to consider. Containers have a more predictable cost as they are a set size, and increasing the size increases the cost. Serverless is less predictable but may be more beneficial for companies that have periods of high and low traffic.

Elasticity plays a part in planning for future growth by allowing for resource growth when there is high traffic, making it possible for more users to use the application. Pay-for-service also plays a role in growth by cutting costs when the services are not used. For example, for an application that assists users with their annual taxes, it would be reasonable to predict that, most of the year, the application will not be used as often. During tax season, use will increase and require more resources. With a fixed rate, there will be a large portion of the year that the resources that are paid for are not being used, needlessly increasing costs. Pay-for-service and elasticity are both great for these scenarios as there is no wasted resources.