Kayleigh Kinsey

12/19/24

CS470 Full Stack Development II

**My Presentation: <https://youtu.be/4Io_HqU0wJU?si=Laiv8Ywh67IlFsWb>**

**Experiences and Strengths: Explain how this course will help you in reaching your professional goals.**

**What I've learned**

I have developed a better understanding of full-stack development and cloud development. I've also learned how to use Docker and AWS, and how to explain cloud development concepts to a nontechnical audience.

**My strengths**

I think my main strength is that I am thorough. I focus intently on the details and care deeply about my final product's quality.

**Future roles**

I could assume all sorts of roles in a new job, from backend development and database management to frontend coding and design. So long as I have some guidance from more experienced developers, I feel confident that I could take on any role I need to.

**Planning for Growth: Synthesize the knowledge you have gathered about cloud services.**

**Scaling**

For the most part, scaling is handled on AWS's end, so I wouldn't need to worry about designating more space or compute resources for my application. What WOULD be my responsibility is to adapt my application to be more scalable. The databases, for example, are currently very simplistic and will become difficult to manage on a larger scale, so I would need to redesign them.

**Error handling**

To make error handling easier, I would first want to setup Amazon CloudTrail to help me log and monitor my APIs and Lambdas. This tool can give me insight into how my application works, which would allow me to find and fix errors.

**Cost Prediction**

Most of the costs can be predicted with AWS's tools and a general estimate of how much use the application will see. The prediction can't be exact though.

Locally stored containers are more cost-predictable because the servers that host them have a fixed cost: to buy, to run, and to maintain. Serverless applications are meant to be dynamic and scalable in order to respond to the unexpected, so their cost can be unexpected too.

**Planning for Expansion**

The main pro of the serverless application is that it can scale automatically as needed, so little would have to be done to ensure expansion goes well. From a resources and storage perspective, there is nothing to worry about when scaling up a serverless application.

The cost would need to be considered though. Since most cloud computing service providers charge based on an application's resource usage, expansion could result in much steeper prices. Of course, locally stored programs can still be expensive to expand if new servers have to be purchased.