

Sameeh Alqatabi

CS-470

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CS 470 Final Reflection

YouTube Link: <https://youtu.be/mu3kn8tkMs4>

Experiences and Strengths:

CS 470 has been a valuable experience for me, as it provided me with practical knowledge and skills that I can apply in my future career. The course taught me how to deploy full-stack web applications in the cloud using Amazon Web Services (AWS). I learned how to use AWS services like EC2, S3, and RDS. Through the course, I have gained a better understanding of web development and cloud computing, which are essential skills in today's digital age.

The skills I have learned, developed, or mastered in this course will make me a more marketable candidate in my career field. I have learned how to write efficient and scalable code, design and implement RESTful APIs, and use AWS services for deploying, scaling, and managing web applications.

As a software developer, my strengths lie in my problem-solving skills, attention to detail, and the ability to learn new technologies quickly. I have experience working on various software projects, from small-scale applications to large-scale systems, and I am familiar with different development methodologies, such as Agile and Scrum.

In a new job, I am prepared to assume roles such as a full-stack developer, software engineer, or cloud engineer, as I have the necessary skills and experience to handle these positions.

Planning for Growth:

As my web application grows, I would consider using microservices or serverless architecture to produce efficiencies of management and scale. With microservices, I could break down the application into smaller, modular components that can be developed, tested, and deployed independently, which would make it easier to maintain and scale the application. On the other hand, serverless architecture would allow me to focus on writing code, without worrying about managing servers or infrastructure.

To handle scale and error handling, I would use auto-scaling groups, which can automatically adjust the number of instances based on demand. Additionally, I would implement fault-tolerant and resilient architectures, such as using load balancers and database replicas, to ensure that the application can handle failures without impacting the user experience.

To predict the cost, I would use AWS cost explorer, which provides detailed insights into AWS usage and cost trends. I would also use cloud formation templates to automate the deployment of resources, which would help me control costs.

Containers can be more cost-predictable than serverless, as they are billed by the hour, while serverless is billed per request. However, serverless can be more cost-efficient than containers, as it can scale down to zero when there is no traffic.

Several pros and cons that would be deciding factors in plans for expansion include the level of control, the complexity of the application, and the level of expertise required to manage the architecture. Microservices and serverless can provide greater flexibility and scalability, but they also require more expertise to manage.

Elasticity and pay-for-service play a significant role in decision making for planned future growth. Elasticity allows the application to handle varying traffic loads and ensures that the application can scale up or down quickly. Pay-for-service allows me to pay only for what I use, which can help me control costs and optimize my budget.