Tyler Primas

2/28/2024

CS 470 Final Reflection

Experiences and Strengths:

I have become a more well-rounded person with my experiences during this course. I have learned the basics of using Docker and AWS, which both have a huge potential for careers in the future. I have shown I can understand new concepts quickly and adapt to using them. Some of my strengths as a software developer are problem-solving abilities, continuous learning, time management, security awareness, and programming skills. I would be prepared to take on many different roles in a new job, like any job working with Docker or AWS. I still only have basic skills with them but can quickly learn more.

Planning for Growth:

Serverless on AWS can automatically scale based on demand, eliminating the need for manual scaling. AWS Lambda can scale out as needed. Error handling can be managed using services like AWS Step Functions, which allow you to build resilient workflows, and by integrating with AWS CloudWatch for monitoring and logging. With AWS you can use the cost explorer to estimate and monitor costs. With serverless, you pay only for actual usage, making costs more predictable. Lambda, API Gateway, and other serverless services often have a pay-as-you-go model, making it easier to forecast expenses compared to traditional infrastructure. Serverless is generally more cost-predictable than containers. With serverless, you pay for the actual execution

time and resources used, whereas containers may require provisioning fixed resources, leading to potential over-provisioning. Serverless architectures are particularly cost-effective for sporadic or unpredictable workloads, ensuring resources are only consumed when needed.

Some pros in plans for expansion include scalability, cost efficiency, quick deployments, and availability. Some cons include limited execution times, possible vendor lock-ins, limited infrastructure control, and possible monitoring issues. Elasticity allows resources to scale up or down based on demand. This is important for planned future growth as it enables organizations to efficiently allocate resources, ensuring that infrastructure scales seamlessly to handle increased workloads during expansion and contracts during periods of lower demand. The pay-for-service model aligns costs directly with usage, offering cost predictability and efficiency. In decision-making for planned future growth, this model allows organizations to scale their infrastructure while only paying for the resources consumed. It reduces the need for upfront investments in capacity, providing a more cost-effective approach for expansion and enabling better financial planning.

Youtube link: https://youtu.be/zoiXYRu6j_8