

Dylan Wade

April 26, 2024

CS 470: Final Reflection

<https://youtu.be/KyHfpKf7yME>

CS 470: Final Reflection

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

This course has helped me develop my skills in web development, design, and architecture. Specifically, in the context of cloud native web-application development. This skill set is incredibly marketable in the current state of the software engineering industry. More and more companies are seeing the benefits of cloud-native development and are choosing to focus on making scalable products directly on the cloud. Personally, I feel that my strengths as a developer are certainly scentered around the development of business logic. I haven't quite delved into front-end development and design, however I am confident in my ability to parse, transform, and utilize data. I think I am currently prepared to take on an entry level full-stack developer position. I currently work as a software test engineer, and my increased experience with the process of development would also make me feel confident taking on more responsibilities within my role, or potentially pushing for a lead position.

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

Serverless architectures offer plenty of advantages for managing and scaling web applications efficiently. In a serverless architecture, services are handled by a third party, allowing for scaling automatically based on demands. This approach minimizes wastage as it uses only what it needs, rather than scaling an entire application based on an estimate. Implementing monitoring and logging, using tools like AWS CloudWatch or Azure Monitor, helps in identifying and fixing errors quickly.

As far as cost predictability goes, containers are often easier to control because they run on fixed resources that can be budgeted ahead of time, making costs more predictable. Serverless, while usually more cost-efficient for consistent traffic, can lead to unexpected costs if traffic spikes or the code is inefficient, leading to longer execution times. Serverless architectures are advantageous for reducing operational responsibilities

and can scale effortlessly, but they might introduce latency in cold starts and could be limiting due to runtime constraints.

Elasticity and the pay-for-use model are crucial in decision-making for future growth. Elasticity lets applications automatically adjust their resource usage to meet demand, keeping consistent performance during peak loads without overpaying during off-peak times. This capability is essential for growing applications that experience variable workloads. The pay-for-use model works with this by ensuring that costs are directly correlated with usage, which is beneficial for startups looking to keep tight control over budgets. Together, these features curb the risks associated with planning server and storage based financial commitments, making cloud environments particularly good for businesses planning to scale operations.