CS 470 8-1 Assignment: Final Reflection
Kyle Blan 4/28/24 https://www.youtube.com/watch?v=L9LN1IWcNBA

Reflections

Throughout my journey in CS 470, I've gained invaluable skills that have not only enhanced my technical capabilities but also strengthened my prospects as a software developer. This course has equipped me with a solid foundation in full stack web development, cloud computing, and project management, making me a more marketable candidate in my career field.

In terms of skills acquired, I've learned to design and develop robust APIs, implement efficient database management techniques, and deploy scalable web applications in the cloud. Additionally, I've honed my problem-solving abilities, critical thinking skills, and attention to detail through various hands-on projects and assignments. As a software developer, my strengths lie in my adaptability, creativity, and dedication to delivering high-quality solutions that meet both user needs and business requirements.

Looking ahead, I am prepared to assume roles such as full stack developer, cloud engineer, or DevOps engineer in a new job. My proficiency in both front-end and back-end development, coupled with my understanding of cloud service concepts, positions me to contribute effectively to cross-functional teams and tackle complex technical challenges.

In planning for the future growth of my web application, I envision leveraging microservices or serverless architecture to enhance efficiency and scalability. Microservices offer granular control over individual components, allowing for easier scale and error handling. On the other hand, serverless computing abstracts away infrastructure management, enabling automatic scaling and reducing operational overhead.

To predict costs, I would carefully monitor resource usage and leverage cloud service pricing calculators to estimate expenses accurately. While containers provide more control over resource allocation, serverless computing offers more predictable costs due to its pay-for-use model.

Pros of expansion using microservices or serverless include improved scalability, fault tolerance, and cost efficiency. However, cons such as increased complexity, potential vendor lock-in, and performance overhead must be considered.

Elasticity and pay-for-service are critical factors in decision-making for planned future growth. Elasticity ensures that resources can scale dynamically to meet demand, while the pay-for-service model ensures cost efficiency by charging only for resources consumed. By strategically planning for scale and elasticity in the cloud, I aim to build a resilient and cost-effective infrastructure that can support the growth and success of my web application.