Scarlet Hodges

4-26-2025

CS470

CS470 Final Reflection

Experiences and Strengths

Throughout taking CS470, I've significantly increased my technical skills and feel as if I've been provided with a firm foundation in cloud computing concepts, effectively aligning with my professional aspirations. Compared to Full Stack Development I, Full Stack Development II has provided great insight on how to migrate full-stack applications to a server cloud environment. This has advanced my readiness for roles that will require both backend and frontend development expertise in the future.

Strengths as a Software Developer

I consider my strengths to include…

1. Adaptability: I'm comfortable learning new technologies and adapting to different programming environments.
2. Problem-Solving Skills: I'm able to dissect complex problems and find efficient and scalable solutions using cloud architectures.
3. Attention to Detail: I have a strong focus on writing clean and most importantly maintainable code, following the best practices in software development as taught in several classes including CS470.

Prepared Roles

Prepared roles I'm prepared to assume in a new job with my recently acquired skills would be a full-stack and API developer, a cloud solutions engineer, and a software engineer that focuses on microservices architecture.

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Planning for Growth:

The skills I've learned and developed to become a more marketable candidate in my career field would be that I can have a grasp on frontend and backend API pertaining to full-stack development, furthermore I have migrated an application to a serverless host like AWS. Microservices architecture allows for a separate deployment of services, facilitating independent scaling based on corresponding demand. Each of these services can be optimized for performance and updated without affecting the entire application. Serverless computing (like AWS Lambda) allows developers to focus on writing code without worrying of the underlying infrastructure.

Scale management and Error Handling:

To handle scale management in the future of my application, I would use auto-scaling features provided by AWS to automatically adjust the resources allocated based on the current workload. Error handling mechanisms such as retries on failure, circuit breakers, and proper error logs are all great ways to identify and address issues properly.

Cost Prediction:

Depending on the architecture, serverless solutions are the obvious choice cost-effective wise, as you only pay for the resources used. Likewise, containers that I've previously utilized and may continue to use offer predictable loads and costs, furthermore they can cost multiple services on fewer resources than traditional methods.

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Pros & Cons – Expansion Plans:

In plans or expansion pros would include enhanced performance through dedicated microservices, reduced time to market new features, and built-in scalability and flexibility in serverless solutions. The cons include complexity in managing multiple services and ensuring CORS communication and costs can escalate unpredictably if resources are not managed accordingly.

Elasticity and Pay-for-Service Role

In decision-making for future growth, elasticity is an extremely important factor. Having systems that can automatically adjust to traffic fluctuations ensure that resources are used efficiently, which also equates to lower costs during off-peak hours while still running smoothly in high-demand periods. The pay-for-service model allows businesses to invest in infrastructure only when it's needed, lowering the initial cost barrier and risk associated with expanding. This type of model supports experimentation in services, as there is less financial commitment required upfront.

This final reflection highlights the skills I've honed throughout my time in CS470, my strengths as a developer, and my outlook on the growth to come. As I move forward in my career, I look forward to applying these insights in frontend and backend development while adaptign to any new challenges I may face in the landscape of software development and cloud computing. Thank you so much!