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2/18/24

CS 470 Final Reflection

Video link: https://youtu.be/fhxtxKUrI2g

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

Taking this course has been instrumental in aligning my professional goals with practical skills and knowledge necessary for success in the software development field. Through this course, I've gained a comprehensive understanding of modern technologies, frameworks, and methodologies that are highly sought after in the industry. Specifically, I've learned how to effectively design, develop, deploy, and maintain web applications using cutting-edge tools and practices.

Skills Acquired: Expertise in cloud computing services, particularly in deploying applications on platforms like AWS. Understanding of microservices architecture and serverless computing, enabling efficient resource management and scalability. Strong problem-solving abilities and attention to detail in debugging and optimizing code for performance.

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

With microservices, scaling can be achieved by deploying additional instances of specific services based on demand. Error handling can be decentralized, allowing individual services to handle errors independently. Predicting costs in a microservices architecture can be complex due to the need to manage multiple services and their associated resources. Tools for monitoring usage and cost allocation are necessary for accurate predictions. Serverless computing offers more predictable costs since pricing is based on usage metrics such as execution time and resource consumption, providing clearer insights into cost implications. Elasticity allows resources to scale up or down dynamically based on demand, ensuring optimal performance and cost-efficiency. Pay-for-service models align costs with usage, providing greater flexibility and scalability without upfront investments in infrastructure. In conclusion, careful consideration of factors such as scalability, cost predictability, and operational efficiency is crucial in determining the most suitable architecture for future growth and expansion of web applications. Both microservices and serverless offer unique advantages and challenges, and the choice between them depends on specific project requirements, business goals, and technical constraints.