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CS 470 Final Reflection

Presentation: https://youtu.be/6pF819MAGH4

In this course, I acquired in-depth knowledge of cloud computing, which will be instrumental in achieving my professional objectives. I engaged in hands-on experiences with tools such as Docker for containerization and the establishment of microservices architectures. Additionally, I examined serverless technologies, which enhance the efficiency and scalability of applications. These competencies position me as a strong candidate for roles within the software development sector.

One of my key strengths as a developer is my adaptability; I am committed to continuously learning new technologies. I prioritize writing clean and efficient code while methodically addressing challenges as they arise. With the skill set I have developed, I feel well-prepared to pursue opportunities as a cloud engineer, full-stack developer, or DevOps specialist.

In considering the future growth of my web application, it is essential to focus on cloud scalability and cost-efficiency. Implementing a microservices approach will allow for the decomposition of the application into smaller, manageable components, facilitating targeted scaling without affecting the entire system. For instance, should a particular

service experience increased traffic, I will be able to scale that component independently and efficiently.

To effectively manage scaling and potential errors, I plan to employ autoscaling features and monitoring tools such as AWS CloudWatch to ensure seamless operations. Cost predictions will depend on my choice between containers and serverless solutions; containers prove to be more predictable for consistent high loads, while serverless functions offer economic advantages during traffic spikes, with billing based on execution, ensuring that I only pay for what I utilize.

Maintaining elasticity is imperative for allowing the application to scale according to demand, thus minimizing costs during periods of decreased traffic. Pay-as-you-go pricing models are particularly advantageous for managing future growth, enabling focused resource allocation without incurring unnecessary expenses.