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CS470 Reflection

Link the presentation

https://youtu.be/kFu1ovPUhxk

The culmination of the SNHU Computer Science program is the capstone courses CS465 and CS470. In CS465, we were introduced to building a MEAN stack application, and CS470 allowed us to containerize this application and transition it to a serverless architecture. These capstone courses leveraged the foundational concepts taught earlier in the program, enabling us to adapt to a new platform quickly. Even though I might not pursue a software developer role, I've been recognized as the subject matter expert for software solutions at my current job.

Serverless architecture offers numerous advantages. Over the past few decades, significant disruptions, like the Great Recession or the pandemic, have impacted businesses. Serverless solutions enable organizations to minimize IT investments, focusing on their core product. This flexibility allows companies to adapt to changing demands swiftly.

However, serverless systems come with cost-related risks. The increased cost could be substantial if a site experiences a surge in traffic. It's essential to determine cost management strategies early in serverless app development. Potential strategies include:

- Blocking Access: Restrict access once a specific cost threshold is reached. Ideal for non-commercial applications.
- User Charges: Passing on the service cost to the user, suitable for services like streaming.

- Incorporate in Pricing: Analyze the traffic-to-sale ratio and include service costs in product pricing.

On the other hand, containerization, which usually operates on VPS (Virtual Private Servers), tends to have more predictable costs. Most VPS providers offer a fixed monthly charge. A significant drawback is that VPSs can't scale dynamically. If traffic spikes suddenly, the application could crash. Containers are especially valuable when you aim to keep the application's business logic confidential, like in algorithmic stock trading, ensuring proprietary control and security.