

Final Reflection

CS 470 Full Stack Development II

<https://youtu.be/7wBtfCNCtHM>

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The topics we covered in CS 470 Full Stack Development 2, have certainly helped me in becoming a better software developer in multiple ways. Learning how to use tools such as Docker, Angular, MongoDB, in addition to the AWS services such as Lambda, DynamoDB, and S3. I was able to strengthen my interpersonal skills as a developer by working through issues with my fellow students. Cloud-based applications are extremely popular today, and having this experience gives me a foundation of the necessary skills to be competitive for these types of jobs.

In AWS, microservices and serverless tools are able to produce efficiencies across an application stack. One example of this is how Lambda and Step Functions work together to handle errors with ease. Scaling concerns can also be mitigated by using AWS Auto Scaling, which makes automatic adjustments based on the utilization EC2 and DynamoDB instances. Serverless is generally more predictable as far as cost is concerned. For many workloads, its "pay-as-you-go" pricing model is ideal. You pay for the actual execution time and resources used, with minimal costs associated with idle resources. This model is particularly well-suited for applications with variable workloads.

Containers can be cost-effective for workloads with a consistent demand for resources, as you can provision a specific amount of compute capacity based on your needs. However, predicting costs in a containerized environment may be more challenging when dealing with changing workloads.

Elasticity and pay-for-service play a huge role in decision-making for future planned growth. This is because prices vary based on demand. Therefore, the more popularity the app gains, the more expensive it will be to maintain it. However, in many cases this is very much worth the expense. Not having to manage servers and infrastructure is very valuable and allows the developers to focus on what they are good at. Overall, in most scenarios, using a cloud provider with pay as you go services such as AWS is worth it in terms of value.