Module Eight Assignment

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CS-470 Full Stack Development II

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Video Presentation Link:

https://youtu.be/h70hxXigrgI

This course has taught me how to develop an application fully using the MEAN stack approach. We then learned how to migrate our application into the AWS cloud using tools like docker where we could put our application into the cloud. Then once we were in the cloud, we learned how to manage the API gateway, manage users with IAM, use Lambda functions, store data in a S3 bucket, and finally use DynamoDB. As a software developer it becomes important to understand the full scope of a project even if we are not aiming to be a full stack developer as it helps to bring clarity to the project and helps practice best coding and security practices. I found that as I develop more and more code, I become a better problem solver as well since it's not always a simple solution and often requires you knowing how the pieces fit together. With all this in mind and cultivation of all the work we have done thus far I am aiming for the role of being a network engineer however I believe that I would also qualify to be a full stack developer or a cloud network engineer.

Delving deeper into our studies we can see that AWS can provide powerful and useful tools that will come in handy when looking to migrate or manage applications in the cloud. Cloud services are more attainable as they can help scale and start up without the worry of managing said servers. The autoscaling of the cloud would be able to handle the workload as it comes in and AWS would simply charge us for what we used during our month. Errors are bound to happen in an application so it would be best to keep an eye out for common errors in logs and run a monitor to ensure that nothing is going on in the background.

I have not had the chance yet to predict the cost for a cloud environment, however there is always a log in AWS in how much we are going to be charged and from where. This could help to start out a base and then we could use estimates based on others information like a cost

calculator where it will take the average requests we make and convert that into cost. It would be more predictable to find the cost of a container as it would be running locally on your machine, meaning you know the exact amount of power you need to run it compared to outsourcing to a third party.

As a company expands, they need to take a lot of things into consideration, first is it necessary? If yes it could mean more revenue since you have a bigger footprint now, but would it outweigh the cost to do so. For example, you would need to understand that you need more time to develop and maintain this expansion. Security and maintenance costs would also go up since you now need to cover a lot more, it’s important to keep up with security threats to keep customers. You can now handle more traffic and could have the advantage over others, but you must be wary of overextension. This is where AWS comes into play as you know can expand as much as you want without the worry of increasing cost being lost since the servers would automatically adjust to the workload and they are automatically being patched and updated by AWS themselves. Paying for your needs makes it a great tool to stop things like overreaching.

In conclusion, CS 470 has prepared me for a wide range of roles in the software development field, and my experiences on the course have honed my technical skills and abilities. When planning growth of my web applications, I'll leverage cloud services to ensure scalability, cost-efficiency, and reliability while considering the trade-offs between different architectural choices and the role of pay as you go.