

Craig Harrigan

12/13/2021

CS 470 Final Reflection

Youtube Link: https://youtu.be/s3k0_iczvY8

Experiences and Strengths:

Over the length of this course, I have developed many skills that will make me a more marketable candidate in my field. The experience gained by working with AWS, one of the largest cloud-based computing solutions on the market will be infinitely useable and marketable in a potential career opportunity. This course also helped me develop my strengths as a software developer, among them being my debugging skills. As with any system that is fully developed by a single individual, there were several small errors and issues encountered along the way that required debugging in order to allow progress to be made.

Planning for Growth:

Utilizing the AWS model and infrastructure allows for easily scaling and error handling. The serverless services spin up to scale automatically and have built-in solutions for error-handling. Predicting the cost when using it is a much more difficult task, especially when considering the cost over a large period of time accounting for growth and increased resource usage. AWS charges for resources used per hour, with tiers of computing resources available. So, as your system gets more resource heavy it will hit a point where the trade-off for using the lowest available option slows your system down enough that it costs you more money vs just stepping up to the next highest tier of compute resources. Where that occurs is going to depend on the type of solution you're running and the rate at which you grow. As a result, there is almost no

argument that using containers is more predicable from a cost management standpoint than serverless. That being said, when you get to the point where you're spending that much money on infrastructure, usually your company and solution is making so much money that investing the time and energy into refactoring onto a different platform isn't something most people chose to do (which is of course AWS's plan from the get-go). Therefore, your decision to make plans for expansion will be based on how important ease of environment is to you, how your profit margins are / what your business model can sustain as a cost outlay for the service as well as how important a highly reliable uptime metric is to your solution. Serverless and AWS puts the ease of environment and reliable, high uptime squarely in the pros column while sacrificing the trade-off for the cost. Moving forward, the pay-for-service plans are going to become more and more common, we've already seen a shift to it in the past decade or so. The concept is invading most corners of technology-based products and even now taking over exercise equipment (Pelaton, Toner, etc). Not only are they difficult to avoid at this point, but they do provide an elasticity that most solutions and products can benefit from as they grow. The ability to scale almost instantly, while only paying for the resources you actively use is one of AWS's best features and will certainly play a role in deciding where to host your solution when you plan for the future and beyond.