

Link to PowerPoint Presentation: [CS 470 Project Two Presentation Bamford - YouTube](#)

Cloud computing is nearly ubiquitous in the tech space and AWS is the behemoth that runs it all. Learning how to work with DynamoDB, S3, Lambda Functions, API Gateways and get a web site running in the cloud are all skills that are needed in today's marketplace. Having even a passing knowledge of these things makes you a marketable candidate. As a software developer I have two strong strengths. The first is the ability to recognize patterns, this has helped me a lot when developing back-end code. The second thing is that I can find the information I need to perform tasks that I either don't have any knowledge of to begin with or have forgotten how to do something. Learning AWS is just the start of the journey, you one decides to get certifications in AWS then a whole host of job opportunities become available including Cloud Architect, Developer, Systems Admin, DevOps, Security, and others.

Cost forecasting is a job in and of itself, for new companies the best way would be to research companies in similar markets or hire someone with the knowledge of forecasting. Once the application is running for some time the picture of use becomes clearer, making cost forecasting easier. Container costs are much more predictable than serverless costs. A company should know how many containers they will need to run their applications, however that same company can only predict how many users will be accessing their application at any given time.

Whenever a company decides to expand it should not be taken lightly. Many factors must be taken into consideration including but not limited to how much to expand, what aspects need to be expanded, what is needed to complete an expansion, and finally the cost to expand. Some pros to expanding are improved performance, availability, flexibility, and adaptability to

handle future growth. The cons can be cost, poor traffic distribution, server issues, and database inefficiencies.

AWS offers a pay-for use model by using elasticity that will grow and shrink the capacity for CPU, memory, and storage resources to adapt to the changing demands, that way you never have to worry about paying for resources you don't use or not having enough resources in each time frame. Actual resource usage can change over time and AWS eliminates the need for a company to be able to accurately predict their usage over long periods of time. This method makes sure the no cloud resources go to waste. AWS helps eliminate the guesswork involved in the planning cloud resources.