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CS 470 Final Reflection

YouTube presentation link: https://youtu.be/Yzq_CeuOLxQ

Having now reached the end of my computer science degree program, my hope is that this degree will enhance my resume alongside my Physics degree to help make it more appealing to prospective employers. Although my ideal job is in science research, the software skills I have learned in this course could help, even in that career.

For example, analyzing the signal output of a particle detector requires the storage of a lot of data. With my new skills, I would be better prepared to move that data to the cloud and work with that data within a cloud service if necessary. This could happen if the scale of the data becomes too costly to store on local servers.

A cloud service like AWS could be very helpful for automatic scaling and error handling. Such a digital service also tends to have clear costs for usage. To predict the costs of any service, I would still likely have to estimate how much data will be used, even if AWS would automatically allocate it for me when needed.

Even though a serverless option could end up being cheaper than a container service overall, I think containers might be more cost predictable. The convenience of serverless automation means that a sudden spike in usage or traffic could result in a sudden additional cost.

If you are planning for expansion, ask yourself whether maintaining a strict budget is more important than providing a consistently running service. In my first example of a team of researchers analyzing signals, only an extremely small group of users need access to that data, and likely only for

certain scheduled times. In that case, 24-7 elasticity for a variable amount of access may not be a factor in your service decisions.