CLOUD ARBITRAGE

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How can we help Duke researchers find the best deal for computing resources made available by cloud providers?

PROJECT SUMMARY

- Scraped, processed, and visualized partition availability data from the Duke Compute Cluster (DCC) and spot instance pricing from Azure and AWS
- Formatted this data into an interactive dashboard for researchers' use

MACHINE LEARNING

- Experimented with ARIMA, SARIMA & Holt-Winters models to predict pricing in AWS and availability in the DCC

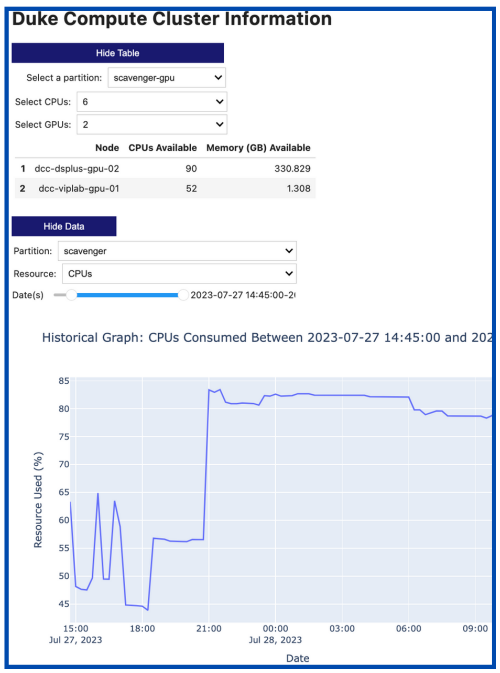
PROJECT HIGHLIGHTS

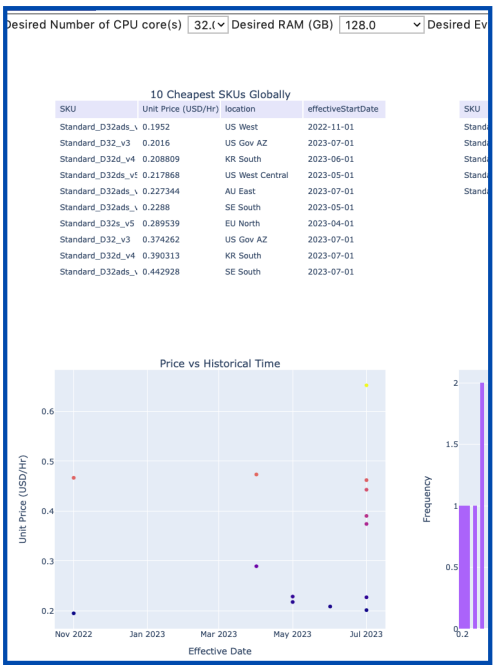
- Duke OIT updated its allocation incentives for researchers based on project findings
- Spot Market: Microsoft Azure is significantly cheaper than Amazon Web Services

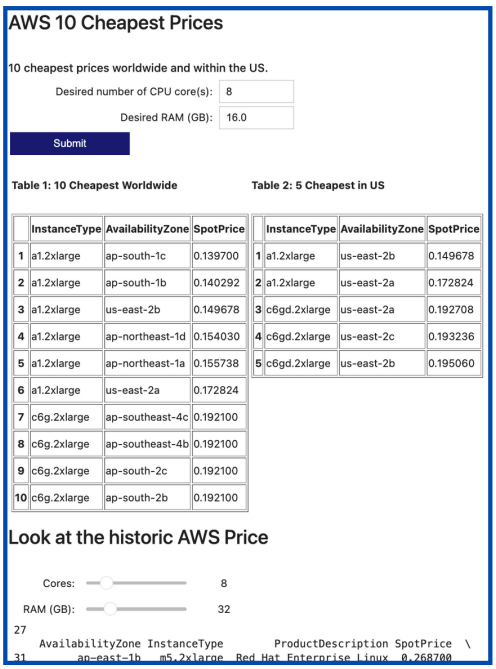
DUKE COMPUTE CLUSTER

AZURE

AWS







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The dashboard repository can be found at https://gitlab.oit.duke.edu/jlc188/cloudarb-dashboard