Sahir Mody

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Experience

Software Development Engineer • *Amazon* August 2022 – PRESENT

- Designed and developed an experimental validator in Java to create curated detail pages for high-value Amazon sellers that protected 1,400+ item families from instability and reduced catalog churn for the initial selected selling partners by about 45%
- Documented the validator's behavior for complex cases by writing a thorough integration test suite and adding queryable logs through SQL using AWS Athena to monitor its effects on Amazon's catalog, as well as metrics to track its performance
- Implemented an asynchronous workflow to update cache entries by receiving requests in an AWS SQS queue, process them in an AWS ECS service, and emit metrics to an AWS CloudWatch dashboard, with queryable logs to analyze traffic patterns
- Analyzed root causes of test suite failures blocking deployments across teams, and executed mitigation to no-op dependency calls and decouple test suites by testing service contracts rather than end-to-end, reducing test failure rates by over 50%
- Automated team's standard operating procedures by writing Python scripts to query multiple databases/diagnostic tools and synthesize results, enabling on-call engineer to complete root cause analyses and mitigation of operational issues within minutes
- Acted as Operational Excellence Czar, tracking team support tickets, determining the common recurring root causes, and prioritizing project plans to resolve them permanently, reducing the average operational load of the team by roughly 30%
- Authored detailed documentation, runbooks, test and launch strategies, and dashboards for a new service, enabling 6 other developers to quickly onboard to the project, collaborate effectively, and debug the service during on-call rotations
- Led my team's Kanban process, tracking productivity metrics and collaborating with team members to address pain points and facilitate knowledge sharing sessions to make sure the team understood long-term goals when making design decisions

Software Development Engineer Intern • *Amazon* June 2021 – August 2021

- Implemented an AWS Lambda to periodically retrieve schema for 10,000+ catalog attributes and cache data in AWS S3
- Developed a query builder UI with React to pull cached attributes and help users construct complex SQL queries without error
- Added usage metrics and access control for new UI to see how effectively it addressed customer issues about writing queries

Software Engineering Intern • *Capital One* June 2020 – August 2020

- Engineered a dashboard application with D3.js to track, visualize, and query software usage data across the company
- Implemented Flask API endpoints to retrieve results of company-wide database queries and format data for visualizations

Software Engineering Intern • *Capital One* June 2019 – December 2019

- Wrote Python scripts in Jupyter Lab to process 2,000+ cybersecurity events and find patterns indicating suspicious behavior
- Integrated C3.js into language processing app UI to create more intuitive and interactive visualizations of model results

Education

University of Maryland, College Park August 2018 – May 2022

B.S. in Computer Science with Business Analytics Minor • Cum Laude

Technical Skills

Programming Languages: Java | Python | SQL | C | HTML | CSS | JavaScript

Technologies: Amazon Web Services | Git | Flask | Keras | Node.js | Express | jQuery | Mockito

Projects

Moodbird Satisfaction Dashboard

- Built an API with Flask to perform sentiment analysis with Python NLTK on thousands of tweets based on search terms and created an interactive graphical dashboard with Chart.js to retrieve and summarize the analysis results in simple visualizations
- Project placed in the Top 3 out of 10 teams at the Capital One Software Engineering Summit Hackathon

Machine Learning Stock Predictor

- Implemented a web application tool to retrieve and pre-process a company's historical stock data with Pandas, train a neural network created with Keras, and display line graphs of the model's predictions after each epoch of training with C3.js