

Maggie Yan

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SKILLS

AWS: S3, EMR, Lambda, Athena, EC2, Cloudwatch
PostgreSQL, Apache Airflow DAG, Python, Golang, Java

EXPERIENCE

Software Engineer - Amazon

July 2022 - Present

- Introduced code optimization moving from $O(n*n)$ to $O(n)$ by introducing a ranking and removing unnecessary calculations for the business outcome. Reduced runtime and resource usage by ~75%, saving over \$48k/yr in AWS infrastructure cost. Simplifying the logic increases code reusability
- Led Design and Implementation of World Wide, scaled out Search widget from 1 to 21 marketplaces each supporting multiple languages.
- Whilst on-call, reduced cost of infrastructure by 20%, saving \$30k, improving memory management of EMR cluster.
- Owned running project to A/B test multiple datasets across four Amazon.com shopping pages, optimizing the customer purchasing journey.
- Automated Code Review descriptions and implemented format checks to increase quality of code reviews.

Software Engineer (promoted in 7 months) - Better.com

July 2021 - June 2022

- Built an industry-leading mortgage pricing engine in 6 months with the team. Owner of the price lock management backend system. The engine is 10x faster than the best alternative in the market and provides 100x more serving capacity with moderate resource usage.
- Automated tools for parity testing of complex price adjustments and eligibility rules between 3P SaaS and new systems. Report generated by the tool reduced turnaround time from days to minutes.
- Led data quality improvement effort for the engine, driving more than 5 engineers and product managers to improve data quality to 95% within a month. Previously stuck at 50% for 3 months.
- Leveraged AWS infrastructure and products to streamline product deployment and debugging.
- On-call rotation to investigate and resolve live incidences and ensure product reliability.
- Learned Golang on the spot and started parsing applications and responses between XML and Go objects after two weeks.

Software Engineer - Africa Marine Mammal Conservation Organization

April 2021 - July 2021

- Designed and built Test suites for database migration.
- Improved existing citizen science platform by adding new components across the entire stack using Symfony.
- Built mobile UI using flutter, to help scientists crowdsource images from fishermen to monitor endangered turtles.

Personal Projects

Pintellect *An online visual discovery engine inspired by Pinterest and my love of art and science.*

[demo](#) | [github](#)

- Handled data validation and user authentication on the backend.
- Implemented custom search algorithms using Active Record as well as Redux state, allowing users to filter for specific boards and save pins to them.

Menutube (AWS, MongoDB, Mongoose, Express.js, ReactJS, Node.js)

[live](#) | [github](#)

A video sharing platform that allows users to plan their meals based on nutrition needs, diet preference and ingredients on hand.

- Led the team to complete UI styling and design in under 4 hours while maintaining consistency across all site elements.
- Designed an algorithm in the backend, allowing the frontend to send one request querying data from multiple models.
- Implemented a multipurpose React Component using the Drag and Drop API to integrate content with a meal-planning calendar interface.
- Hosted video content on AWS and indexed video S3 links for easy retrieval.

EDUCATION

Stanford University - [Data Structures](#) (5 credits), [Discrete Maths and Theory of Computation](#) (5 credits)

Harvard Extension School - [Multivariable Calculus](#) (4 credits), [Linear Algebra](#) (4 credits)