

# Mathuran Sadagopan

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## Skills

**Programming Languages:** Kotlin, Java, TypeScript, JavaScript, Python, SQL, C#, C++, C

**Frameworks / Libraries:** Dagger, Guice, Spring Boot, React.js, Redux, Express, Next.js, Django, llama-index

**Technologies:** Android, Node.js, Docker, REST, gRPC, WebSocket, AWS, DynamoDB, PostGreSQL

## Education

**McMaster University | BEng of Computer Engineering (CO-OP)**

| April 2021

**AWS Certified Solutions Architect - Associate**

| May 2023

## Experience

**Rooster Financial | Software Engineer**

| Jan 2024

Creating a financial intelligence platform to help people grow their nest egg.

- Reduced customer touchpoints required to track financial data by developing a web app to automate it.
- Create a RAG service that summarizes financial data and provides insights via natural language [Python, llama-index]
- Created a web app to help manage and visualize financial data for different accounts. [React, Nextjs, PostGreSQL]

**Amazon | Software Development Engineer**

| June 2021 – Dec 2023

Delivered fraud prevention solutions, in Amazon consumer payments using cloud scale distributed technology.

- Saved \$80,000/year by auditing the cost of services and removing unused log search tool
  - Resolved 2 issues blocking worldwide Real-time CVV verification for 1 year in 3 months.
  - Improved service availability across 5 AWS regions, and prevented brownouts by implementing a solution to control clients, throttling limits in real time across 5 environments. [Java, Spring Boot, AWS App Config, Elasticache]
  - Increased net customer purchases by ~\$10M due to reducing card testing and improving purchase confidence.
- Developed cloud native solutions that ensured high consistency and availability. [Kotlin, AWS SQS, Fargate, Lambda]
- Improve app performance by 5% by implementing automated performance profiling via AWS CodeGuru
  - Grew documentation coverage from 50% to 100% in 4 months by leading bi-weekly wiki writing sessions

**Microsoft | Software Engineer Intern**

| May 2020 - August 2020

Created features for various Microsoft products such as Windows Power Toys and Microsoft Teams for Android. Quickly learned and adapted to multiple different projects and teams and independently launched features.

- Fixed 3 user pain-points in Microsoft Teams for Android via 3 new features using Android Java / Kotlin
- Produced features that complied with 100% of Microsoft and Android accessibility guidelines
- Successfully demonstrated the feasibility of a Windows color-picking tool via a C# UWP POC app

**Ellis Don | Full Stack Developer**

| May 2019 – August 2019

Streamlined workflows for 100's in the construction industry by building online tools and services.

- Developed responsive and stateful components such as form fields and dashboards.
- Created the front end using React.js and Redux. Backend services were Go or Java Spring Boot

## Projects

**Siren Sense**

| Jan 2021 - March 2021

University Capstone project built using React Native, Python and Tensor Flow. Developed a siren detection app to make noise-canceling headphones and vehicles safer around emergency vehicles.

- Achieved a target accuracy of 80% in our audio detection model developed using Tensor Flow