

# Gowthaman Aravindan

+65 98366284

✉ [gowthaman.aravindan@gmail.com](mailto:gowthaman.aravindan@gmail.com)

🌐 [github.com/gowthaman-01](https://github.com/gowthaman-01)

📱 [gowthaman.app](https://gowthaman.app)

## 🎓 Education

National University of Singapore

Expected Dec 2024

Bachelor of Engineering, 2<sup>nd</sup> Major in Computer Science

**Relevant Modules:** Data Structures and Algorithms | Computer Organization | Networks | Object Oriented Programming | Machine Learning

## 📁 Experience

Google

May 2023 – Aug 2023

Software Engineer Intern

Singapore

- Developed a testing tool in **Java** that provides a visual representation of semantic changes, enhancing code review efficiency by 50%.
- Designed custom **Protocol Buffers** and implemented **RPC services** to efficiently fetch relevant test result data from backend servers.
- Provisioned and configured a new RPC server, actively monitored metrics and responded to alerts to ensure optimal server performance.
- Drafted design documents and underwent design review with senior engineers, ensuring code design adhered to Google's standards.

GovTech (SearchSG)

Aug 2023 – Dec 2023

Software Engineer Intern

Singapore

- Integrated UI configuration options using **ReactJS** for agencies leveraging on no-code website builders, increasing user customizability.
- Refactored search API to enforce access control using by updating the authentication middleware to retrieve client id from access token.
- Resolved numerous bugs with the web crawler and indexer, leading to smoother search experiences and increased product adoption.
- Created a stateless login system for a web application by writing custom **Typescript** classes to store user sessions in browser cookies.
- Embedded **AWS Quicksight** dashboard on web application, with custom date pickers for users to view their search analytics with ease.
- Configured new **PostgreSQL** database using **Prisma**, wrote data retrieval endpoints and deployed them via **Serverless** architecture.

Zendesk

Jan 2023 – May 2023

Software Engineer Intern

Singapore

- Migrated **AWS EC2** development environments to **Kubernetes** clusters which improved resource utilization and reduced infra costs.
- Successfully deployed new features into production, ensuring a stable release by monitoring **Jenkin** smoke tests and **Datadog** metrics.
- Developed a Slack bot using **NodeJS** that uses **NLP** and **supervised learning** to predict answers based on an existing FAQ database.
- Planned and performed authentication key rotation for **AWS ElastiCache** clusters as part of company-wide secrets revocation program.
- Implemented mutations in a **Java GraphQL** server that routes client requests to upstream microservices and wrote unit tests with **JUnit**.

Kinexcs

Nov 2022 – Jan 2023

Software Engineer Intern

Singapore

- Designed widgets using **Figma** and added them into a mobile application using **Flutter** to support the launch of new gamified exercises.
- Integrated a **Unity** game into Flutter and enabled cross communication of game protocols and parameters through Flutter Blue plugins.
- Designed, restructured, and maintained production and staging **DynamoDB** and **RDS** databases that store user stats and game data.
- Built Back-End scripts using **Python (Flask)** and leveraged **Docker** containers for end-to-end testing and verification of API endpoints.
- Spearheaded weekly sprint meetings as the scrum master and managed 2 interns by assigning tasks and providing technical guidance.

PsyFinance

Mar 2022 – Jul 2022

Software Engineer Intern

Singapore

- Shipped UI enhancements such as pagination and modals using **NextJS**, **TypeScript** and **TailwindCSS** that benefited over 5000 users.
- Optimized the front-end performance through centralized state management using **Recoil**, reducing page loading times by about 25%.
- Integrated **Amplitude**, an analytics tool for monitoring statistics such as site traffic and transactions to understand customer behaviors.
- Added **CircleCI**, a CI/CD pipeline to automate the running of **Jest** unit tests on pull requests to prevent bugs from entering production.
- Created a debugging tool that deserializes JSON data into tables for better visualization, increasing productivity of developers by 75%.

## 💻 Projects

PathViz TypeScript, HTML, CSS

- Interactive graph simulation application designed to visualize and compare multiple shortest path algorithms for educational purposes.

## 🔧 Technical Skills

**Languages:** JavaScript, TypeScript, Python, Java, C++, Dart, SQL, Bash, HTML, CSS, Swift

**Technologies/Frameworks:** NodeJS, ReactJS, MongoDB, ExpressJS, PostgreSQL, Flask, Flutter, Redux, GraphQL, Jenkins

**Developer Tools:** Git, Linux, Vim, Docker, Kubernetes, Postman, AWS, Heroku, Vercel, Devspace, Prisma, Serverless

## 🧑‍🎓 Activities

Teaching Assistant

Aug 2021 – March 2022

- Mentored 50 students in a 12-week long robot design course which exposed them to **C++** and Arduino **micro-controller programming**.