

Guruprasath Gopal

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EDUCATION

Singapore University of Technology and Design (SUTD) (Graduating May 2025)

September 2021 – May 2025

- Bachelor of Engineering (Computer Science & Design)

WORK EXPERIENCES

SUTD - Teaching Assistant (Intro to Python Programming)

November 21 - Jan 22

- Facilitated Python programming instruction, breaking down complex concepts and enhancing students' coding proficiency.
- Mentored students on coursework and projects, delivering clear explanations, actionable feedback, and additional practice materials.
- Coordinated IoT lab setup, installing and configuring Raspberry Pi, and resolving technical issues.

Primech A&P Pte Ltd - Software Engineer Intern (R&D Dept)

August 23 - January 24

- Led the enhancement of robot dashboards by optimizing **CRUD-based RESTful API** functionality and implementing secure **JWT**-based authentication, boosting system efficiency by 30%.
- Refactored and **streamlined JavaScript codebase** to **improve readability** and maintainability, contributing to **faster development** cycles and reduced technical debt.
- Debugged backend services on a cloud-hosted platform (Oracle Service Cloud), ensuring smooth business operations.
- Debugged and fixed bugs in the Python backend of an IoT platform, ensuring seamless sensor interaction for SmartClean sensors.
- Integrated features to allow **real-time monitoring** of robot tasks, increasing operational transparency.

Software Engineer Intern (R&D Dept)

April 2024 - September 2024

- Refactored legacy Flutter code, improving compatibility and performance by modernizing the codebase.
- Collaborated with a team to design and develop a custom personnel management system using PHP.
- Enhanced project sustainability by introducing **comprehensive documentation** for legacy codebase, including detailed API references, architectural overviews, and inline code comments, ensuring smoother onboarding for future developers.
- Produced a high-quality promotional video for the company's flagship robot, showcased at the **CleanEnviroSummit** Singapore (CESG), enhancing global visibility and marketing efforts.

ADDITIONAL INFORMATION

HealthMate (Fitness Tracking App)

- Built a fitness app with calorie tracking and activity sync from **Google Fitness**.
- Developed backend in **Java** and used **Firebase** for data storage.

InvoiceHub

- Full-stack app using **AWS Textract** to extract receipt data and store it in **MySQL**.
- Used **Agile Methodology**, **Figma**, and user testing for client feedback.

3D Angry Bird Space

- Created a cube physics simulation game with **OpenGL** using a custom **C++ physics engine**.

Atari Breakout

- Developed a 2D Breakout game in **C** using the **SDL2** game library.

Aircon Balance Bot

- Built **Python bots** with web scraping (**BeautifulSoup**, **Selenium**) to check university aircon balances.

Extract Sizing Chart

- Uses **AWS Textract** and React to extract and display sizing charts and their context from images into JSON format .

Skills

Front-End: HTML, CSS, JavaScript, React, TypeScript, Next.js, Tailwind , NextJs, React Native

Back-End: Node.js, Express, MongoDB, MySQL, GraphQL, Apollo , NoSQL , SQL

Languages: JavaScript, TypeScript, Python, Java, C++, C , Go

DevOps & Tools: Git (Version Control) , Agile, Figma, AWS OCR, Firebase, Selenium , Cypress (E2E) , Jest

Other :OOP Concepts , JWT , Restful APIs

References

Charles Ng: (VP , Innovation & Technology) Charles_ng@primech.com.sg