

Heng Sheng Yao, Dan

Singapore • hengsydan@gmail.com • +6593376481 • <https://www.linkedin.com/in/heng-sheng-yao-dan/>
Portfolio website: <https://dan-portfolio-orpin.vercel.app/>

PROFESSIONAL SUMMARY

Computer Science undergraduate with an open-minded and adaptable approach to software development, interested in building solutions to real-world problems and improving user experiences.

EDUCATION

Singapore Institute of Technology (SIT) / University of Glasgow (UOG)

Sep 2024 – Current

- BSc (Hons) Computing Science
- Expected Graduation: Sep 2027

Nanyang Polytechnic (NYP)

Apr 2019 – Apr 2022

- Diploma in Robotic & Mechatronic Engineering
- Awards: Director's List (AY20/21, AY21/22), Edusave Merit Bursary (2021, 2022), Edusave Cert of Academic Achievement (2021)

Institute of Technical Education (ITE)

Apr 2017 – Apr 2019

- Higher Nitec in Mechatronics Engineering
- Awards: Merit Bursary (2018), Edusave Cert of Academic Achievement (2018)

WORK EXPERIENCE

STEM TRAINER (Freelance) / Newton show

June 2024 – Current

- Managed and taught students aged 4–11 by executing lesson plan that promotes technical proficiency and increased interest in STEM topics

Technical Operations (Intern) / SSMC

Mar 2021 – Sep 2021

- Supported automation system deployment, configuration, and troubleshooting
- Assisted with post-deployment housekeeping to ensure smooth operations
- Maintained system information and updated deployment records, reducing weekly eRack pod errors by 15%

PROJECTS

Software Quality Assurance Platform (On-going)

- A CI/CD DevSecOps platform for code quality validation and automated build, testing, security scanning, and deployment.
- Implemented web interface to easily configure and track build pipelines.

Smart Pantry Tracking & Recipe Recommendation System

- AI-powered web app that identifies groceries from photos, tracks ingredients, estimates quantities, and predicts expiry dates.
- Mobile alerts and portioned recipe recommendations to help users avoid food spoilage, overbuying, and overcooking.
- Integrated AI Singapore's SEA-LION to generate authentic Southeast Asian recipes and enable multilingual support.

Flight Map Routing Web Application

- Built a web interface to compute and recommend flight routes between airports.
- Ranked and compared routes based on distance, number of connections, and cost-effectiveness using various algorithms.

Smart Waste Management System

- Developed an IoT-based waste management system with a real-time monitoring dashboard.

- Integrated multiple sensors to track waste levels, temperature, humidity, and liquid spillage in real time.

Community Animal Care & Reporting Web Application

- Developed a community reporting platform to enable quick submission of animal incident
- Built community forums to support discussion and information sharing about neighborhood animals
- Implemented a containerized microservices architecture for scalability and maintainability

Game Market Analytics & Data Management Platform

- Developed a centralized video game data platform to support sales comparison, trend analysis, and planning.
- Dashboard to compare game sales across platforms and regions.
- Managed structured and unstructured data to support analytics and reporting.

ACTIVITIES

Singapore Institute of Technology (SIT)

- Build for Impact Hackathon 2026 Participant
- SIT Breakers
 - Origins Interschool Participant (2025)
 - SBS Transit Performer (2025)
 - SITizen Day Performer (2025)
 - SITizen Welcome Wave Participant (2025)
- SIT Soul Extreme
 - SIT 10th anniversary performer (2024)

TECHNICAL SKILLS

Languages

- C, Java, Kotlin, Python, Rust, html, CSS, JavaScript

Database

- MongoDB, MySQL, PostgreSQL

Software tools

- Git, Docker, Postman, Jupyter Notebook, Cisco Packet Tracer, Putty

LANGUAGES

Spoken

- English, Chinese

Written

- English