Xue Yufeng

+65 92372711 | xyf.oco@gmail.com | yufeng-resume.web.app | github.com/XlightNtrEnx | linkedin.com/in/xue-yufeng/

Education

Singapore University of Technology and Design 8 Somapah Rd, Singapore 487372

Bachelor of Computer Science First Class Honours *Sep. 2023 – Present*

4.83/5.00 GPA (Excl. Humanities Modules)

Experience

Intern Sep 2025 – Dec 2025

Panasonic R&D Center *202 Bedok South Ave 1 #02-11, Singapore 469332*

- Will be assisting with R&D of various algorithms and hardware to develop a blood pressure sensor for healthcare applications.

Tutor Mar 2023 – Jan 2024

Envision Learning *35 Circuit Road #01-442, Singapore 370035*

- Developed soft skills through collaboration with colleagues and meaningful interactions with students.

Projects

ParcelEye AI Tracker | *Android SDK, AWS, Docker, ExoPlayer, FFmpeg, Flask, Gradle, Java, MongoDB, Nginx, Python, SAM2.1, Spring Boot* Jan 2025 – Apr 2025

- Proposed the project, which was accepted by my team. It consists of an Android app livestreaming to an AI server and playing the AI's output to track parcels, addressing the real-world problem of parcel theft at our school.
- Developed a Flask API to control and feed a livestream into the SAM2.1 AI using Nginx and FFmpeg.
- Created a Spring Boot API integrated with MongoDB for authentication using JWT.
- Implemented ExoPlayer in the Android app to consume HLS streams from the AI and integrated the authentication flow with the API and AI.
- Hosted the AI and API on AWS using EC2 and configured the VPC to secure our servers.
- Containerized the AI server, reducing image size from 32GB to 5GB using multi-stage builds.

FPGA Game | *Alchitry AU, Alchitry Labs, Lucid* Jan 2025 – Apr 2025

- Our FPGA controlled six 7-segment displays. I ensured there was no excessive current flow by writing code that rapidly cycles through all displays, creating the illusion that they are all lit simultaneously.
- The FPGA needed to control the digits on the displays at 6V but could only output 3.3V signals, so I researched and used a PNP BJT transistor to step up the voltage.

Cat Dog Classifier | *Google Colab, Pillow, Pytorch* Dec 2024 – Dec 2024

- Applied concepts (residual connections, hierarchical layers, data normalization, and standardization) from proven models (ResNet, VGG, etc.) to build a model achieving 95% accuracy in training and validation for binary classification of cats and dogs.
- Used GradCAM to highlight the parts of images the AI uses to distinguish cats from dogs.

Resume Website | *CRACO, Firebase, GitHub Actions, React, Styled-Components, Jotai, Vite* Oct 2024 – Present

- Used Firebase BaaS to authenticate users but later dropped it in favor of a better UX for recruiters.
- Utilized GitHub Actions to implement Continuous Integration/Continuous Deployment (CI/CD) with Firebase hosting.
- Applied SOLID principles for the first time in a significant project, leveraging states, contexts, and providers to that end.
- Migrated from CRACO to Vite for improved RAM usage during development.

Technical Skills

Languages: C/C++, CSS, HTML, Java, JavaScript, Lucid, Python, SQL (MySQL, Postgres), TypeScript
Frameworks: Flask, JUnit, NestJS, Node.js, Qt, React, Spring Boot
Developer Tools: Android Studio, AWS, CRACO, Docker, Firebase, Git, GitHub Actions, Google Cloud Platform, Google Colab, IntelliJ, PyCharm, Railway, VS Code, Visual Studio, Vite
Libraries (Java): Dotenv, ExoPlayer, Firebase Admin, Jakarta Mail, Java Net, Java IO, JUnit, MongoDB Driver, Netty, OkHttp, Retrofit, Spring Boot
Libraries (Python): Matplotlib, NumPy, OpenCV, Pandas, Pillow, PyTorch, Requests
Libraries (TypeScript): Styled-Components, Jotai