LAM RONG YI

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EDUCATION

National University of Singapore   **Aug 2023 - May 2027**
Bachelor of Computing in Computer Science
- Minor in Data Analytics

Tampines Meridian Junior College   **Feb 2019 - Dec 2020**
GCE 'A' Levels
- Physics, Chemistry, Mathematics, Economics

PROJECTS

Travella   **July 2025 - Aug 2025**
- Developed a full-stack travel planning web application that allows users to collaboratively create and visualize trip itineraries
- Built with **React**, **Tailwind CSS**, and **Next.js** for UI and API routes, using **Prisma ORM** to connect to a **PostgreSQL database**
- Integrated **Google Maps API** for itinerary visualization and **Google OAuth 2.0** for secure user authentication
- Containerized and deployed the application using **Docker** and **Render**

Computer Vision Project   **May 2025 - June 2025**
- Implemented a computer vision system that enables users to control mouse movements and actions through hand gestures
- Utilized **MediaPipe** for real-time hand landmark detection and **OpenCV** to process webcam video streams
- Designed a heuristic-based gesture recognition system, leveraging hand landmark positions to interpret user intent
- Integrated **AutoPy** to control mouse movements and simulate user input at the operating system level

EZStates   **Aug 2024 - Nov 2024**
- Developed an application for real estate agents to manage properties and clients
- Implemented core backend logic in **Java** and built the UI with **JavaFX**.
- Utilized **JSON** for persistent data storage, enabling reliable serialization and deserialization of application data
- Achieved **95%** test coverage on **CodeCov** using **JUnit**
- Implemented CI/CD processes using **GitHub Actions** for test coverage analysis, ensuring code quality and maintainability

Savings Squad   **May 2024 - Aug 2024**
- Developed a **Flutter-based Android application** to streamline daily expense tracking and provide users with insightful spending analytics
- Integrated **Firebase Authentication** to enable secure user sign-in and protect personal data
- Designed and optimized a **NoSQL Firestore database schema**, enabling efficient storage, retrieval, and management of user transactions and interactions

SKILLS

Programming Languages: **Python**, **Java**, **C**, **JavaScript**, **TypeScript**, **HTML**, **CSS**
Frontend: **React**, **Next.js**, **Tailwind CSS**, **Flutter**
Backend/Database: **Firebase**, **PostgreSQL**, **Prisma**
Tools and DevOps: **Git**, **GitHub**, **GitHub Actions**, **Docker**
Libraries: **OpenCV**, **MediaPipe**, **Pandas**, **NumPy**, **JUnit**

WORK EXPERIENCE

Health Sciences Authority, *Component Processing and Inventory Technician*   **Feb 2023 - Present**
- Performed blood processing with strict adherence to **standard operating procedures**, **regulatory guidelines,** and **quality assurance protocols**
- Operated in a **high-compliance** environment requiring precision and risk awareness
- Ensured process integrity through strong **attention to detail** and disciplined **workflow management**

Singapore Armed Forces, *Detachment Commander*   **Jan 2021 - Nov 2022**
- Attended several leadership courses such as the Commando Small-Unit Leaders Course and the Officer Cadet Course
- Led and mentored junior trainees through the commando training syllabus, emphasizing **leadership**, **structured communication**, and **team coordination**