

Kalista Phey

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TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C++, SQL, HTML/CSS, Java, C, Lucid (HDL)

Frontend and Design: React, Tailwind CSS, Figma, Adobe Illustrator, Next.js

Backend and APIs: FastAPI, GraphQL, REST APIs, Flask, Django, Node.js, Supabase

Databases and Tools: PostgreSQL, MySQL/SQLite, MongoDB, Git, Docker, VS Code, CI/CD

Hardware: FPGA (Alchitry Au), ESP32, Arduino, PlatformIO

WORK & LEADERSHIP EXPERIENCE

Griffin Labs (Lionsbot)

Singapore, Singapore

Software Engineering Intern

May 2026 – July 2026

- Engineered a modular C++ and Python hardware-interface library, exposing clean API over CAN bus for high-level robotics control systems on Jetson Orin
- Built a ROS 2 (Humble) wrapper node exposing the driver as standard topics for robot-level control, ensuring low-latency communication between drivers and nodes

Vertex Holdings (Temasek Holdings)

Singapore, Singapore

Software Engineering Intern

September 2025 – December 2025

- Redesigned and implemented a key internal feature's UI end-to-end using React and Tailwind CSS, reducing layout complexity and improving navigation flow used by all teams across Vertex Holdings' global network of 8 investment teams
- Extended the GraphQL schema, authored custom query validation logic, and coordinated backend deployment to serve structured investment data
- Built dynamic, responsive frontend views for newly integrated data, including sorting table layout and logic, nested tabbed navigation and UI updates of layout components
- Wrote unit and component integration tests to validate form inputs and sorting logic, maintaining stable CI builds across feature releases
- Collaborated with communications and product stakeholders to translate brand narratives into an interactive annual report microsite in Framer, creating custom vector illustrations and design assets in Adobe Illustrator

Singapore University of Technology and Design

Singapore, Singapore

Undergraduate Teaching Assistant

May 2025 – August 2025

- Designed and delivered a Python workshop with 20 first-year students; post-session survey showed a 45% increase in confidence
- Conducted weekly code reviews and debugging support for 3 class cohorts

Singapore University of Technology and Design

Singapore, Singapore

Undergraduate Research Assistant

October 2023 – December 2024

- Built a Jupyter Notebook extension that enables type hinting, improving code maintainability for Python code
- Worked directly with faculty to gather user requirements, iterated on the implementation, and delivered a tested documented extension

Akribis Systems

Singapore, Singapore

Software Engineering Intern

April 2023 – July 2023

- Shipped user-facing data-entry applications backed by SQL, cutting manual processing time by 30-45% across daily operational workflows
- Designed structured input interfaces with validation logic that eliminates redundant entry steps and reduced operational data error rates

Singapore University of Technology and Design Badminton Club

Singapore, Singapore

President

May 2024 – January 2025

- Grew club retention rates by 150%; Co-organized inter-club tournaments involving 75 players and strengthened club outreach by 50%
- Managed a \$2500 budget and allocated resources for equipment, facilities, and events

PROJECTS

I Want A Sushi | Lucid, FPGA, Alchitry Au

April 2025

- Architected a real-time interactive game engine on an FPGA using Lucid, implementing custom finite state machines (FSMs) and synchronous datapaths to manage dynamic gameplay states, scorekeeping, and timing logic.

NUTRIL | React, Javascript

December 2024

- Built an AI-assisted health-monitoring interface in React and TypeScript; 1st Runner-Up out of 20 teams at SUTD What The Hack 2024.

EDUCATION

University of Waterloo

Waterloo, Canada

Exchange Program

January 2026 – April 2026

- Courses: CS349 User Interfaces, CS454 Distributed File System and SE465 Software Testing and QA

Singapore University of Technology and Design

Singapore, Singapore

Bachelor of Engineering (Computer Science and Design)

September 2023 – April 2027

- Cumulative Grade Point Average: 4.58 / 5.0; Recipient of the Global Merit Scholarship