Amit Rahman ⌇

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EDUCATION

Computer Engineering, Bachelor of Engineering (Honours), National University of Singapore   **May 2025**

- **NUS Engineering Scholar** - Awarded to 50 engineering students in faculty cohort of 1500

SKILLS

Programming Languages	C/C++, Python, Rust, Kotlin, TypeScript, JavaScript, SQL, HTML, CSS, Bash
Technologies	FreeRTOS, React, AWS, GCP, Kubernetes, Docker, Grafana Prometheus, CMake, Linux

WORK EXPERIENCE

Software Engineer   **Feb 2024 - Present**
Kisi Inc.⌇ *Cloud-Based Security Platform* — C, C++, MQTT, lwIP, GCP, AWS IoT   ***Brooklyn, New York***

- Owned transition and IoT cloud platform integration for fleet of **50,000** access control IoT devices to a new proprietary IoT platform.
- Developed support for inbound HTTP capabilities, contributing to network architecture redesign, for Microvisor (microcontroller hypervisor) running on STM32 & FreeRTOS based firmware stack.
- Executed on development of an in-house IP stack & driver, focusing on UDP protocol implementation using the lwIP & mbedTLS library to support critical local network features such as offline cache and feedback systems.
- Established secure communication protocols for the IoT device ecosystem, including data encryption and signature validation processes to uphold network and data integrity.
- Collaborated on development of a comprehensive testing strategy and documentation, ensuring high coverage and maintainability of the system architecture and cloud integration solutions.

Software Engineer   **Jul 2023 - Sep 2023**
Coditioning ⌇ *EduTech Startup* —Python, React, Node.js, PostgreSQL   ***Remote***

- Owned system design & development of a code execution engine, tailored for Coditioning's e-learning platform.
- Designed a RESTful OpenAPI Schema for a Python-centric backend, laying down foundation for seamless code submission and retrieval, as well as historic data access.
- Devised a suite of intuitive API endpoints to empower frontend functionalities: code submissions, status verifications, result acquisitions, and past submission access.

Software Engineer   **May 2023 - Aug 2023**
HydraX ⌇*FinTech SaaS Startup* —TypeScript, Python, AWS, Kubernetes, Prometheus, Grafana, SQL   ***Singapore***

- Deployed & implemented internal tools in Elastic Kubernetes Service, enabling cost analysis and optimization for the company's products, increasing granularity from cluster to container level.
- Identified and handled duplication in log ingestion monitoring stack and reduced cloud storage costs in various clusters up to 39.8%.
- Migrated AWS resources to CDK in the infrastructure pipeline for private digital exchanges in development clusters, for increasing automation coverage of CI/CD pipeline.
- Enhanced Grafana automation stack, integrating continuous deployment for versioned Grafana dashboards in new nodes, with promQL hooks.

Venture Capital Analyst   **Jan 2021 - Mar 2021**
K3 Ventures ⌇ *Venture Capital Family Office* —Python, Pandas, NumPy, Bs4   ***Singapore***

- Scraped and visualized data from SEC EDGAR Filing API and identified IPOs stock price trends around lock ups.

PROJECTS

- **Port Scanning networking tool in Rust** ⌇ —Rust, Tokio.   **Mar 2024**
- **Rust static blog website** ⌇ —Rust, Yew, Pulldown cmark, Github Actions.   **Jan 2024**
- **Screen time limit Android App** ⌇ Kotlin, Jetpack Compose.   **Jan 2024**
- **6502 Microprocessor Emulator C++ Library** ⌇ —C/C++, ASM, CMake, Boost.   **Dec 2023**
- **Search and Rescue Robot Vehicle** ⌇ —C/C++, ROS, Linux, Arduino, Baremetal, UART, TLS.   **Oct 2022**
- **Timetable Manager CLI tool** ⌇ —Java, Gradle, JUnit, MVC, Github Actions.   **Oct 2022**

AWARDS & ACTIVITIES

Hackathons & Competitions: NUS Hack&Roll (2024), NUS Greyhats Capture The Flag (2023), Solana Metacamp Hackathon (2022)
Extra Curricular Activites: Residential College 4 House Committee (2021-2023), Developers Club (2021-2023)