

Amit Rahman

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WORK AUTHORIZATION

Singapore Citizen; eligible for H-1B1 and J-1 US visas, no lottery/petition required

EDUCATION

National University of Singapore (NUS)
Bachelor of Engineering (Honours) in Computer Engineering

May 2025

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

EXPERIENCE

Qube Research & Technologies
Software Engineer Intern

May 2025 – Aug 2025
Hong Kong SAR

- Profiled and optimized order router C++ microservice components, improving peak throughput from 60,000 to 140,000 trades/s used by event-based traders on Instinet clients
- Identified and eliminated bottlenecks in memory management strategy of FIX protocol message processing services
- Optimizations across the processing stack, cutting down p99 tail latency of trades processed by 4x factor
- Introduced lightweight service instrumentation and microbenchmarking suite, enabling continuous telemetry collection

Grasshopper
Software Engineer Intern

Sep 2024 – Feb 2025
Singapore

- Authored framework for declaratively creating custom and performant Wireshark protocol dissectors written in Rust
- Spearheading new developments of a high-performance Rust implementation parser generator for Google’s Protobuf, enhancing data serialization efficiency
- Conducting thorough performance benchmarking ensuring Protobuf parsers meets stringent high-frequency trading requirements

Kisi Inc.
Software Engineer I

Feb 2024 – Aug 2024
New York

- Led the transition of 50,000 access control IoT devices to FreeRTOS and a GCP-backed proprietary IoT platform, improving system reliability and scalability
- Developed critical firmware components including a thread-safe networking library and encryption module, resulting in an 80% reduction in networking latency and a 100x improvement in encryption/decryption speed
- Collaborated with cross-functional teams to implement embedded telemetry support, enhancing overall system monitoring

Coditioning
Software Engineer Intern

Jul 2023 – Sep 2023
Remote

- Engineered an end-to-end sandboxed code execution environment with a responsive feedback system, achieving an average response time of 500ms for ~1,000 users
- Designed and implemented REST API and message queue system, ensuring efficient handling of code submissions.

HydraX
Software Engineer Intern

May 2023 – Aug 2023
Singapore

- Implemented internal cost analysis tools in Kubernetes, improving granularity from cluster to container level, reducing cloud storage costs across various clusters by up to 40%
- Migrated legacy AWS resources & CI/CD to infrastructure-as-code, for private digital exchanges

K3 Ventures
VC Summer Analyst

Jan 2021 – Mar 2021
Singapore

- Developed Python dashboard & web scrapers to gather and analyze IPO stock price trends for VC clients

SKILLS

Languages: Modern C++ (17-23), C, Rust, Python, SQL, HTML, CSS, Bash
Technologies: Docker, Kubernetes, AWS, GCP, FreeRTOS, CMake, Linux, Perf, Git, Grafana, Vim
Coursework focus areas: Systems Programming, Compilers, Programming Languages