

# Amit Rahman

amit.rahman@u.nus.edu | github.com/amitrahman1026 | linkedin.com/in/amitrahman1026 | +65 92955950

## WORK AUTHORIZATION

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

## EDUCATION

**National University of Singapore (NUS)** May 2025  
Bachelor of Engineering (Honours) in Computer Engineering  
• **NUS Engineering Scholar** - Awarded to 50 engineering students in faculty cohort of 1500

## EXPERIENCE

**Qube Research & Technologies** May 2025 – Aug 2025  
Software Engineer Intern 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** Sep 2024 – Feb 2025  
Software Engineer Intern 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.** Feb 2024 – Aug 2024  
Software Engineer I 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** Jul 2023 – Sep 2023  
Software Engineer Intern 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** May 2023 – Aug 2023  
Software Engineer Intern 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** Jan 2021 – Mar 2021  
VC Summer Analyst 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