

Tan Hiok Kuek

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PROFESSIONAL SUMMARY

Computer Science student with production-grade full-stack development experience serving 10,000+ users. Proven track record in cloud infrastructure optimization (reduced AWS costs by 50%), AI/LLM integration, and delivering scalable web applications. AWS Certified Solutions Architect with hands-on experience across frontend (React, Next.js), backend (Python, Node.js), and DevOps (Terraform, Docker). Demonstrated ability to architect robust solutions, collaborate with cross-functional teams, and drive measurable business outcomes. Multiple hackathon winner with strong problem-solving skills and passion for digital innovation. Known for enthusiasm, accountability, and collaboration in team environments. Available for internship July 2026 - December 2026.

CORE COMPETENCIES

- Java
- Python
- Data Structure and algorithm
- Git
- AI/ML Integration
- Full-stack Development

EDUCATION

National University of Singapore <i>Bachelor of Computing in Computer Science (Cumulative GPA 4.64)</i>	Aug 2024 – Nov 2027 (Expected)
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WORK EXPERIENCE

NUS School of Computing – <i>Undergraduate Teaching Assistant</i>	Jan 2026 – Present
• Delivered lab sessions on Object-Oriented and Functional Programming abstractions in Java, strengthening 13 students' understanding of CS fundamentals and type systems.	
NUS-NCS Cybersecurity Lab – <i>Research Assistant</i>	Aug 2024 – Aug 2025
• Sole frontend engineer owning architecture, performance, and delivery for a production platform used by 10,000+ users. • Reduced AWS Cost by 50% (\$200/day to \$100/day) through scalable architecture and automation using cloudwatch. • Built backend AI workflows using Python and modern LLM orchestration tool to detect phishing emails. • Designed dashboards enabling comparison between workflows, activity tracking and decision-critical insights. • Built cross-platform browser extension bundled with a native host, that supports on-premise email phishing detection. • Stabilised production systems by migrating AWS infrastructure over to Terraform under tight deadlines.	
Singapore Armed Forces – <i>Deputy Head Ops and Security Officer</i>	Jan 2023 – Nov 2023
• Coordinated training logistics and data security operations for 300+ personnel, implementing PowerBI dashboards and Excel automations that streamlined training schedule tracking and improved planning efficiency by 40%. • Achieved operational excellence through effective personnel management and process optimization, earning Sword of Merit and Commanding Officer's Coin for outstanding performance.	

TECHNICAL PROJECTS

Agentic Social Media Content Generator – <i>AI Agents & LLM Orchestration</i>	Sep 2025
• Built AI content pipeline with GPT-4, Claude, and LangSmith for automated Reddit scraping and script generation, generating 1M+ views. • Optimized LLM performance through comprehensive monitoring, reducing API costs.	
HomeLab Infrastructure – <i>Personal Server & Automation</i>	Jul 2025
• Built and managed Linux home server infrastructure with Docker containerization, Cloudflare Tunnels for secure access, and automated backups, achieving 99.9% uptime.	
Tanbuchu – <i>E-commerce Platform</i>	May 2025
• Built responsive e-commerce platform with Next.js and TypeScript, integrating Stripe payment processing and automated email notifications. • Drove 50+ organic visitors and 100+ sales through SEO optimization, mobile-first design, and performance tuning strategies.	

HONORS & TECHNICAL COMPETITIONS

- NUS Hackers Hack&Roll (1st)
- CloudHacks 2023 (1st)
- SplashAwards 2023 (1st)
- GroundZero 2024 (Finals)
- SUTD WhatTheHacks 2023 (1st)
- NUS CHS Case Comp (Finals)

ADDITIONAL INFORMATION

- **Languages:** Python, Java, Javascript, TypeScript, Terraform, Bash, SQL
- **Frameworks:** Next.js, React, React Native, Plasmo, Flask, FastAPI, Node.js, Langchain
- **Developer Tools:** Git, Docker, AWS, Microsoft Azure, Google Cloud Platform, Firebase, Supabase
- **Certifications:** [AWS Certified Solutions Architect - Associate \(SAA-C03\)](#)
- **Interests:** Running, Bouldering, Diving