LEE CHUN YONG

Cybersecurity Engineer | AI and Systems Security | Software Development
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PROFILE

Cybersecurity-focused engineer with hands-on experience in digital forensics, secure systems design, and applied cryptography. Background spans offensive security tooling, defensive programming, privacy-preserving technologies (TEE/FHE), and AI safety evaluation. Currently pursuing BSc in Design & AI at SUTD with an exchange at Tampere University, Finland.

EDUCATION

Singapore University of Technology and Design (SUTD) | 2023 – Present
BSc in Design and Artificial Intelligence **GPA: 4.08**

Tampere University, Finland (Exchange) | Dec 2025 – Jul 2026
Courses: Secure Programming · Wireless Networking · Internet of Things · Functional Programming

Temasek Polytechnic | 2018 – 2021
Diploma in Cybersecurity and Digital Forensics **GPA: 3.75**

EXPERIENCE

Cybersecurity Intern – Biometrics and Profiling | HTX (Home Team Science and Technology Agency), Singapore | *2025 – Present*

- Implementing Trusted Execution Environments (TEE) and Fully Homomorphic Encryption (FHE) to enable privacy-preserving biometric processing, ensuring data remains encrypted during computation
- Researched practical deployment of TEE+FHE pipelines to harden biometric data against insider threats and inference attacks
- Contributed to defensive architecture for biometric profiling systems under a government security context

AI Engineering Intern | AI Startup Pettichat, Hangzhou, China | *Nov 2025 – Dec 2025*

- Built an end-to-end LLM evaluation pipeline to benchmark model outputs across accuracy, consistency, and safety dimensions
- Investigated the impact of system prompt engineering on LLM behaviour, informing safer and more reliable model deployment practices
- Documented evaluation methodologies and produced internal guidelines for responsible AI usage

Cyber Advisory Intern | KPMG Singapore | *Jul 2020 – Feb 2021*

- Developed a Linux triage script (Bash/Python) from scratch for automated forensic data collection during incident response; integrated output with Elasticsearch for real-time dashboards
- Conducted malware sandbox analysis and authored internal threat intelligence documentation for advisory teams
- Configured and tested tooling across multiple Linux distributions (Ubuntu, RHEL, CentOS, Debian) tailored to client-specific operational requirements

PROJECTS AND RESEARCH

Secure Password Manager | Tampere University – Secure Programming (COMP.SEC.300) | *May 2026*

- Designed and implemented a password manager applying OWASP recommended encryption (AES-256) and OWASP hashing (Argon2/bcrypt) to protect credentials at rest
- Integrated GitHub Actions CI/CD pipeline for automated vulnerability testing and static analysis, ensuring code integrity across contributions

IAB Technology Research – 5G/6G Wireless Security | Tampere University – Wireless Networking (COMM.NET.600) | *May 2026*

- Authored a research essay on Integrated Access and Backhaul (IAB) technology, analysing threat vector and future use cases in 5G/6G network architectures
- Studied protocol evolution from 3G to 5G-NR, with focus on authentication, handover security, and spectrum management

IoT Digital Twin Project | Tampere University – Internet of Things (COMP.CE.450) | May *2026*

- Developed a digital twin prototype to mirror physical IoT device state, exploring real-time synchronisation and data integrity constraints in connected systems

Linux Triage and Forensic Visualisation Tool | KPMG / Personal | *2021*

- Created a comprehensive incident response triage script automating system artifact collection (process trees, network connections, logs, persistence mechanisms)
- Deployed across Ubuntu, RHEL, CentOS, and Debian; integrated with Elasticsearch + Kibana for intuitive forensic dashboards
- Sole developer: independently scoped, prototyped, tested, and documented the tool with minimal supervision

Home Server and Security Infrastructure | Personal Project | *2025*

- Repurposed an old PC into a fully functional home server, demonstrating resourcefulness and hands-on hardware-to-software integration without a dedicated infrastructure budget
- Self-hosted a hardened Debian server with Docker: WireGuard VPN, DNS filtering (Pi-hole), firewall rules (nftables), reverse proxy, custom domain with SSL, and private cloud storage
- Implemented SSH/SFTP hardening, automated certificate renewal, service monitoring, and offsite backup routines for continuous uptime

AMD Process Automation and AI – Service Design Studio | SUTD | *August 2025*

- Led a 6-person team to reduce excel VBA scheduling time from 45 minutes to 10 seconds via a Python backend with React/Vite frontend
- Managed GitHub branching strategy, PR workflows, and code reviews; built an AI chatbot for post-handover code maintenance

SKILLS

Security & Forensics: TEE (Trusted Execution Environments), FHE (Fully Homomorphic Encryption), Cryptography (AES-256, Argon2, bcrypt), Digital Forensics, Incident Response, Malware Analysis, Secure Programming, Penetration Testing, Network Security, Vulnerability Assessment, IAB/5G, Threat Modeling

Languages: Python, Bash, JavaScript, C++, Haskell, HTML/CSS

Tools and Platforms: Docker, Git/GitHub Actions, Elasticsearch/Kibana, WireGuard, Linux (Ubuntu/RHEL/Debian/CentOS/Arch), React, Arduino

AI/ML: LLM evaluation pipelines, prompt engineering, OpenAI API, TensorFlow, Scikit-learn, GANs, model safety assessment

ACTIVITIES

WorldSkills Program – IT Network Systems Administration | Temasek Polytechnic | *Apr 2019 – Apr 2020*

- Trained for international competition in network systems administration; delivered peer lessons on ethical hacking, network protocols, and system vulnerabilities