

JOASH TAY

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PROFILE

Cybersecurity and Digital Forensics student focused on low-level system mechanics, software exploitation, and offensive security: reverse-engineering software architectures, analysing x86/x64 assembly, and building automated digital services. Primary areas include vulnerability analysis, binary exploitation, reverse engineering, and x86-64 assembly, alongside Docker containerisation, Nginx reverse proxy configuration, and Linux systems.

EDUCATION

Singapore Polytechnic, *Diploma in Cybersecurity and Digital Forensics (DCDF-S54)* Singapore
Year 2 of 3-year diploma Apr 2025 - Dec 2028

- Activities: School of Computing Subcommittee Member; Class Leader; Crew Member, Strictly Dance Zone (SDZ) Bboys; Active First Aider, Singapore Poly Red Cross Society

Clementi Town Secondary School, *GCE O-Level Certificate* Singapore
'O' Level Computing Jan 2021 - Dec 2024

- Activities: President, Infocomm Technology CCA; Student Union Leader

Yew Tee Primary School Singapore
PSLE 2014 - 2020

PROFESSIONAL / TRAINING EXPERIENCE

Digital and Intelligence Service (DIS) - Sentinel Program, *Cybersecurity Apprentice* 2025 - Present

- Selected into a national cybersecurity talent pipeline sponsored by MINDEF/SAF
- Study and build network security products, secure network programming, and applications of AI in cybersecurity, through holiday workshops and technical training tracks
- Worked with national digital defence frameworks, network protocols, and security engineering projects
- Core technical focus: binary exploitation, reverse engineering, and x86-64 assembly analysis

LEADERSHIP & CO-CURRICULAR EXPERIENCE

Infocomm Tech CCA, *President, Clementi Town Secondary School* 2023 - 2024

- Elected to lead the school's technology cohort, overseeing weekly operations and skills training for members
- Mentored and prepared student teams for national-level competitions in computing, cybersecurity, and artificial intelligence, including Hack@AC, BrainHack, and the National Olympiad in Informatics (NOI)
- Planned club exhibitions and acted as the main point of contact between school management, external technology vendors, and the student body

Student Union, *Leader, Clementi Town Secondary School* 2021 - 2024

- Represented the student body and coordinated school-wide initiatives with school leadership

Strictly Dance Zone (SDZ), *Bboy Crew Member, Singapore Polytechnic* 2025 - Present

- Built teamwork and performance discipline through multi-hour weekly training with the dance team
- Adapted to complex choreography under tight timelines, improving agility and endurance

VOLUNTEERING & COMMUNITY INVOLVEMENT

Singapore Red Cross, *Volunteer First Aider* Jan 2025 - Present

- Certified CPR/AED and Standard First Aid provider; deployed to provide emergency medical coverage at large-scale events including Singapore Polytechnic Open House and the Poly50 anniversary celebrations
- Monitored crowd health and safety, responded to medical incidents, and coordinated with event management and emergency services at events with 1,000+ attendees

People's Action Party, *MPS Appeals Petition Writer* Oct 2024 - Present

- Assisted residents during Meet-the-People Sessions as a frontline point of contact for constituents seeking government assistance
- Documented community concerns on housing, traffic safety, and legal matters, and drafted formal appeals and feedback submissions to government authorities and statutory boards

SAFRA National Service Association, *NDP Backstage Technician* Aug 2025

- Supported live performances at Singapore's National Day Parade by operating and troubleshooting audio and lighting systems and coordinating backstage technical logistics

Singapore Canoe Federation, *Volunteer Referee & Event Support* Nov 2023

- Officiated matches at the Asian Canoe Polo Championships and supported event operations, merchandise sales, and on-the-ground logistics

PROJECTS & COMPETITIONS

Knife Threat Detection AI System, Intel® AI Global Impact Festival: Top 5	2023
Built a real-time AI model to detect knife threats and automatically alert law enforcement	
AI-Drone Integration for Object Recognition, Google AI National Youth Tech Championship: 2nd Runner-Up	2023
Developed an AI model integrated with drone technology to recognise LEGO structures	
Roblox Game Development	2022 - Present
Created and published multiple games, amassing 16,000+ visits and generating 8,000+ Robux in revenue through in-game monetisation	
Self-Initiated Roblox Studio Workshop	2023
Organised and led a workshop for kids with special needs, teaching them to build an Obby (obstacle course) in Roblox Studio	
Other National & School Competitions	2018 - 2025
- Space Faculty Space Data: Participant (2025) - National Olympiad in Informatics (NOI): Participant (2024) - Singapore Amazing Flying Machine Competition: School Representative (2024) - Hack@AC: Participant (2022); First Lego League: School Representative (2022) - BrainHack: Participant (2021) - National Robotics Competition: School Representative (2019); National Robotics Programming Competition: School Representative (2018 & 2019)	

HONORS & AWARDS

ISC2 x SIM Cybersecurity Community Café CTF, Top 6	2025
Excellence in Service and Leadership Award (Gold)	2025
EDUSAVE Award for Achievement, Good Leadership and Service (EAGLES)	2025
Google AI National Youth Tech Championship, 2nd Runner-Up	2023
Intel® AI Global Impact Festival, Top 5	2023
AWS Accelerator Program, Best Project Award: Nursing & Freelancers Category (Farrer Park, SGCodeCampus, AWS, IMDA)	2023
Youth Cyber Exploration Program, Top 8 of Top 10 (Cyber Security Agency of Singapore & Republic Polytechnic)	2022

CERTIFICATIONS & SPECIALIZED TRAINING

- TryHackMe: Pre-Security (Feb 2025) and Security 101 (Jan 2025)
- PortSwigger: BurpSuite Web Security Academy (2023)
- Udemy: Learn Ethical Hacking From Scratch (2022)
- Udemy: Learn Python & Ethical Hacking From Scratch (2022)
- AWS / IMDA: AWS Data Science Accelerator, Certified (2023)
- SenseTime AI Bootcamp: Certificate of Accomplishment (2022)
- Hwa Chong Game Development Sabbatical, completed (2023)
- Singapore Red Cross: CPR/AED and Standard First Aid Provider (2025)

SKILLS & INTERESTS

Security: Penetration Testing, Vulnerability Analysis, Binary Exploitation, Reverse Engineering, x86-64 Assembly, Cybersecurity

Programming & Technologies: C, C++, Go, Python, Lua, JavaScript, HTML, CSS, Bootstrap, Linux/Bash, Kali Linux, Docker, Nginx, Roblox Studio

Digital Literacy: Microsoft Excel, Word; Google Sheets, Docs

Languages: English, Chinese (Mandarin)

Soft Skills: Leadership, Communication, Teamwork, Discipline

Interests: Brazilian Jiu-Jitsu | Muay Thai | Boxing | Breakdancing