AZEL THONG

Singapore | azelthong@gmail.com | +65 9382 4032 | LinkedIn | GitHub | Portfolio

Nanyang Polytechnic graduate with a Diploma in Electronic and Computer Engineering.
Incoming Information Systems student at Singapore Management University.

EDUCATION

Singapore Management University
School Of Computing and Information Systems
August 2027 - May 2031

- *Bachelor of Information Systems*

Nanyang Polytechnic
April 2022 - May 2025

- *Diploma in Electronic and Computer Engineering*
- *GPA: 3.56/4.00*
- *Ministry of Education Edusave Certification of Academic Achievement 2024*

WORK EXPERIENCE

RDC Media
Software Developer
August 2026 - Present

- Developed a secure internal Central Approval System using Next.js, React, TypeScript, Supabase/PostgreSQL, and Tailwind CSS, supporting role-based workflows for quotations, approvals, MIOs, document archiving, and audit history.
- Implemented authentication, role-based access control, Row Level Security (RLS), server-side authorization, API rate limiting, input validation, and hardened PostgreSQL RPCs to protect sensitive business data and prevent unauthorized access.
- Engineered a secure private document-upload architecture using signed Supabase Storage URLs, server-side MIME/file-signature validation, file-size controls, transactional metadata finalisation, and protected replacement workflows.
- Built an automated PDF archive-sorting feature using deterministic browser-side text extraction to identify MIO references, validate them against approved database records, and securely route documents without exposing privileged credentials or relying on AI/OCR services.

ESIEE - Paris
Hardware and IOT Development Intern
April 2024 - June 2024

- Developed components of a fixed weather-station prototype using Arduino programming and embedded hardware.
- Integrated and soldered electronic components to support hardware functionality and sensor connectivity.
- Collaborated with a professor and research team on system design, testing, and troubleshooting.
- Supported prototype validation by testing sensor outputs and troubleshooting hardware–software integration issues to improve system reliability.

Brownie Bites Sg
Small Business Owner
February 2023 - Present

- Managing the brands image of the business through social media, physical advertisements and networking.
- Using time and event pacing to effectively launch new flavours and sales to maximise engagement and revenue.
- Optimising operational efficiency by grouping deliveries, bulk ordering ingredients, baking in batches.
- Revenue to date has exceeded $10,000 SGD, with $370 donated to charities such as HabitatSingapore and Society for the Prevention of Cruelty to Animals (SPCA).

Propnex Realty Ltd.
Administrative Assistant
April 2023 - April 2024

- Processed and validated high-volume records while maintaining accuracy under time-sensitive deadlines.
- Verified data against source documents and provided administrative support in a fast-paced environment.

Swimwerks PTE LTD.
Lifeguard
September 2023 - July 2025

- Maintained facility safety and responded to emergencies through trained rescue, first-aid, and CPR procedures.
- Coordinated with team members and patrons in a high-responsibility environment

The Coffee Bean & Tea Leaf
Barista
August 2022 - October 2022

- Adapted to diverse customer needs and preferences, contributing to improved customer satisfaction.
- Operated and maintained equipment and inventory systems to ensure reliability, efficiency, and cleanliness.
- Accurately processed transactions using the point-of-sale (POS) system.
- Communicated effectively with customers from varied cultural and linguistic backgrounds.

LEADERSHIP EXPERIENCE & ACTIVITIES

Catholic High School Basketball
Vice-Captain
April 2016 - June 2019

- Represented Singapore at National U16 level while serving as Vice-Captain of the Catholic High School basketball team.
- Coordinated with coaches and teammates on training, match preparation, and team strategy.
- Supported team leadership and communication during training sessions and competitive fixtures.

PROJECTS

Food Options Application | React, Next.js, TypeScript, CSS
September 2026 - Present

- Developed a full-stack food discovery and tracking web application using Next.js, React, and TypeScript, enabling users to save, rate, categorize, and revisit restaurants and dining experiences.
- Designed a modular and scalable application architecture, separating data storage, authentication, and application logic to support future multi-user database integration and cross-platform mobile development.
- Applied security-focused development practices, including server-side handling of API credentials, input validation, protected authentication flows, and secure data-access design in preparation for public deployment.

Two-Factor Authentication System | Python, PyOTP, QRCode
June 2025 - June 2025

- Implemented time-based one-time password (TOTP) authentication using Python and PyOTP.
- Generated QR codes for authenticator enrolment and validated time-sensitive one-time passwords during authentication.
- Applied shared-secret and time-based verification concepts to strengthen user authentication.

Chess Application | Python, Pygame
June 2025 - June 2025

- Developed an interactive chess application in Python using Pygame, implementing turn-based gameplay and graphical piece interaction.
- Implemented movement validation for pawns, rooks, knights, bishops, queens and kings, alongside piece capture and game-state management.
- Built features including legal-move highlighting, captured-piece tracking and check detection while debugging gameplay and interface logic.

CERTIFICATIONS

Google
Google Cybersecurity Professional Certificate | 2025
Relevant coursework: Network Security, Linux & SQL, Detection & Response, Python for Cybersecurity, Assets/Threats/Vulnerabilities, Security Risk Management

HarvardX
CS50's Introduction to Cybersecurity | *May 2025*

IBM (edX)
Beginner's Guide to Cybersecurity | Aug 2025

SKILLS & INTERESTS

Programming: Python, TypeScript, JavaScript, SQL, C++, C#, C, HTML/CSS

Frameworks & Libraries: React, Next.js, Flutter, Pygame

Databases & Backend: PostgreSQL, Supabase, REST APIs

Cybersecurity: Linux, Authentication & Authorization, TOTP/2FA, Network Security, Detection & Response, SQL Injection, Cryptography

Tools & Platforms: Git, GitHub, VS Code, Arduino

Spoken Languages: English (Fluent), Chinese