

# Teoh Jia Jing

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*A Mechatronics Engineering graduate with a First-Class Honours degree, with a strong passion for software development.*

## PROFESSIONAL EXPERIENCE

### Backend Engineer

Studio Twenty Sdn. Bhd.

Bangsar, Kuala Lumpur

Mar 2024–Present

- Developed customizable, content-managed websites for clients using **Next.js** and **PayloadCMS**, delivering flexible, scalable solutions tailored to unique business needs.
- Managed end-to-end deployment pipelines with **Docker**, **AWS**, and **private staging servers**, implementing security measures like **IP-restricted access** to safeguard production environments.
- Spearheaded experimentation with **AI-first product design**, working alongside designers to craft prompts and workflows for prototyping full-stack applications before handing off to developers.
- Applied a modern web stack including **Nest.js**, **Next.js**, **React**, **Nuxt.js**, **Vue**, **Elysia.js**, and **Node/Bun** across diverse projects, optimizing for performance, maintainability, and developer experience.

### Software Developer (Part Time)

ViTrox Agritech Sdn. Bhd.

Batu Kawan, Penang

Jan 2024–Present

- **Led software architecture design** for a distributed IoT control system, building local-first desktop applications on **Raspberry Pi nodes** using **Nuxt.js** and **Tauri**, enabling automation for irrigation control.
- Engineered **synchronized data infrastructure** using **ElectricSQL** with **SQLite** on edge devices and **PostgreSQL** on the cloud, ensuring real-time, resilient data updates between offline-capable desktop apps and centralized web dashboards.
- Developed a secure **web portal** with **Nuxt.js**, integrating a **custom OAuth flow** for internal authentication, enabling clients to monitor and control distributed nodes through encrypted API access.
- Implemented a **fine-grained access system**, allowing users to generate unique API keys for node-level permissions, improving security and simplifying multi-node management across clients.
- Provided technical leadership and mentorship for the IoT software team, guiding best practices across backend, desktop, and cloud components to ensure scalability, maintainability, and modularity.

### Freelance Web Developer

Urbanwolf Adventures | i-SURVY Sdn. Bhd.

Kuala Lumpur

Dec 2024–Present

- Collaborated with **Urbanwolf Adventures**, independently translating **Adobe Illustrator designs** into a responsive, SEO-optimized website using **Nuxt.js**, handling asset optimization, layout fidelity, and client feedback revisions without formal design systems.
- Partnering with **i-SURVY**, an industrial IoT company, to develop a **real-time monitoring dashboard** that automates reporting from raw telemetry, replacing manual spreadsheet workflows with **cron jobs**.

## EDUCATION

### Universiti Tunku Abdul Rahman (UTAR)

Bachelor of Mechatronics Engineering with Honours,  
1<sup>st</sup> Class Honours (CGPA: 3.73/4.0)

Cheras, Selangor

Jan 2024

### National Taipei University of Technology (NTUT)

The New Southbound Policy Elite Study Program

Taipei, Taiwan

Jan 2023

## AWARDS

- IEEE Innovation Malaysia 2<sup>nd</sup> Runner Up, working on a vein finder device.
- DBS nBiz Global Startup 2<sup>nd</sup> Runner Up, working on a vein finder device startup competition in South Korea.
- Greatech Award for Innovative Excellence Bronze Award, for the design of automated assembly machine.