

Tania Koh Tze Ern

+65 92370950 | taniakohtzeern@gmail.com | <https://www.linkedin.com/in/tania-koh-tze-ern> | github.com/taniakoh

EDUCATION

Singapore University of Technology and Design

Bachelor of Engineering in Computer Science, Minor in Artificial Intelligence

Singapore

Sep. 2022 – May 2026

EXPERIENCE

Full Stack Developer Intern

Tessely AI

October 2025 – May 2026

Singapore

- Engineered web components using React, Tailwind CSS, Typescript, FastAPI and PostgreSQL (Supabase) with Chakra UI components for the Tessely SaaS platform, transforming process-mining data into dashboard visuals for enterprise process analysis
- Deployed the platform using Vercel for frontend hosting and Railway for backend services
- Led end-to-end product design for the landing page and core SaaS application using Figma

Full Stack Software Engineer Intern

Infineon Technologies

August 2024 – December 2024

Singapore

- Developed full-stack features for the CRM website redesign using C#, HTML, CSS, Javascript, Kendo UI and SQL in ASP.NET to be used by 50+ Business Analysts globally for managing 100+ sample requests orders daily
- Architected the UAT/QA Test Automation (UI) workflow with the custom feature of integrated exporting of test results to Excel to be integrated into the CI/CD pipeline using Python and Playwright
- Designed full UI/UX design using Figma and cross-functional collaboration with Sales and IT team to significantly improve sales operations by 35%
- Collaborated in a Scrum team environment of 7 while utilising Azure DevOps, Git and Confluence

PROJECTS

Algorithm-Driven Workforce Management Application |

St. Andrews Community Hospital

- Developed a responsive full-stack web application using React, FastAPI, PostgreSQL in Typescript by leading a 7-person Agile team to streamline staff operational management into a centralised platform for hospital staff
- Engineered comprehensive CI/CD suite with GitHub Actions automating Docker deployment to AWS EC2, merge conflict detection, and Dependabot auto-merge workflows
- Engineered AI/ML-driven optimisation algorithm methods in Python to automatically generate staff rosters, reducing manual rostering time by over 3 hours per cycle
- Delivered end-to-end UI/UX design to support usability of hospital staff workflows

Mental Health Nonprofit Platform |

Mendisphere, Bettersg

- Designed and developed interfaces using Figma, React.js, Material UI and Typescript, integrating Firebase backend services to enable mental health organisations to access resources efficiently
- Created and executed 10+ test scripts for backend unit testing using Jest with mocking
- Worked in a team of 5 using Jira and Confluence for project management

Automated Training Management Application |

TSH Group Singapore

- Engineered an autonomous monitoring and visualization dashboard using React, Ant Design, Express.js, Node.js, and MongoDB in TypeScript, automating HR data tracking and reporting workflows
- Translated stakeholder requirements into use case diagrams and functional specifications using a Waterfall SDLC approach
- Implemented Cypress end-to-end frontend testing and Jest backend unit testing

Code-Switching Data Translation Pipeline |

- Built an open-source multilingual code-switching data translation pipeline in Python, generating 3,000+ annotated sentence pairs to support natural language inference (NLI) research
- Engineered using LangChain multi-AI agent workflow using Graph and OpenAI API
- Released the dataset on HuggingFace for research use, achieving 80+ downloads