TAN YU HOE

AI Engineer Intern

Singapore

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WORK EXPERIENCE

SAF Detention Barracks **Singapore**
Detention Military Police Feb 2024 – Aug 2025
- Oversaw detainee operations within the Singapore Armed Forces Detention Barracks (SAFDB), ensuring discipline,safety, and well-being of 80+ detainees at any one point
- Served as the Unit Safety Advocate, a secondary appointment, promoting and reinforcing safety protocols to ensure asecure operational environment, reducing work process risks by over 90%

GovTech Singapore **Singapore**
AI Engineer Intern Apr 2022 – Jun 2023
- Main engineer for photo relevance study in municipal feedback cases for MSO (Municipal Services Office). Proposed and developed an Image Relevance model using zero-shot image classification and embedding similarity methods. Achieved 97% accuracy without model training.
- Evaluated the performance of zero-shot visual-language models (CLIP and OWL-ViT) as general-purpose computer vision capabilities, for visual recognition use cases with limited labelled data.
- Implemented interactive web interfaces and backend APIs for zero-shot object detection, using Gradio, FastAPI, PyTorch, Docker, and HuggingFace transformer SDK.

EDUCATION

National University of Singapore **Singapore**
Bachelor in Science, Business Analytics Aug 2025 – May 2029

College of Alice and Peter Tan **Singapore**
University Town College Programme in NUS Aug 2025 – May 2027

Singapore Polytechnic **Singapore**
Diploma in Applied AI and Analytics Apr 2020 – May 2023
- **Honors**: 3.8 / 4.0 GPA
- **Courses**: Staistics, Python for Data Analyitcs, AI & Machine Learning, Deep Learning
- **CCA Grade**: Gold with Honours
- **Distinctions**: ST0503 Back-End Web Development, ST1511 AI and Machine Learning, ST1504 Deep Learning, ST3004 Infocomm Professional Seminar

LEADERSHIP AND ACTIVITIES

SP Artificial Intelligence Student Chapter **Singapore**
Operations Head Dec 2020 – Mar 2022
- Led a project team that developed a headline-based fake news detection application for showcase in Singapore Polytechnic's Open House and Engineering Show 2022
- Orchestrated a Kaggle competition on a curated dataset with real-world applications, attracting 70+ participants and fostering skill development in machine learning and data analysis techniques
- Curated teaching materials and taught concepts on Data Science workflows and Machine Learning concepts for two data-science-related workshops

PROJECTS

Meals with Wheels
Volunteer Lead Aug 2022 – Oct 2022
- Liaising between Singapore Polytechnic and TOUCH Community Services
- Developing and implementing logistical plans for meal delivery routes

- Prioritizing the safety of volunteers and elderly recipients, strictly adhering to COVID-19 (Temporary Measures) Regulations 2022

HONORS AND AWARDS

NUS LifeHack 2023 - First Place + sgID Award   **Singapore**
Issued by *NUS Computing Club*   Jun 2023
- Developed AquaWise, an AI-powered Sustainable Shopping Companion focused on promoting mindful consumption practices among consumers by integrating with popular e-commerce platforms, such as Shopee.

WPH Digital Hackathon 2022 - Second Place Award   **Singapore**
Issued by *WPH Digital*   Apr 2023
- developing an innovative solution to streamline CV screening, addressing the inefficiencies in identifying top talent. Collaborated with a team of tech enthusiasts to create a transformative tool that simplifies the hiring process, showcasing problem-solving skills and a commitment to reshaping the future of the job market.

LICENSES AND CERTIFICATIONS

Google Data Analytics   ID: 5D46PZTLVV9Q
Issued by *Cousera*   Apr 2023

Google IT Automation with Python   ID: 878DAB3LU5FY
Issued by *Coursera*   Jan 2023

NVIDIA - Fundamentals of Deep Learning   ID: l-emxFVgQeCHCjNv8HtyXg
Issued by *NVIDIA*   Feb 2022

AI FOR INDUSTRY® - Foundations in AI   ID: 46333377
Issued by *AI Singapore*   Feb 2022

Microsoft Certified: Azure AI Fundamentals   ID: 9c58eb07-5936-448e-bbe0-2cf45b97d610
Issued by *Microsoft*   Jun 2021

SKILLS, LANGUAGES, INTERESTS

- **Languages**: English (Native Speaker), Chinese (Native Speaker)
- **Programming**: Python, SQL, Javascript
- **Tools**: Git, GitHub, Docker, Visual Studio Code, Ubuntu/Linux
- **BI & Data Analytics**: Tableau, Jupyter Notebook, Numpy, Pandas, Matplotlib/Seaborn, Plotly, Statistics
- **Machine Learning**: Scikit-Learn, TensorFlow, PyTorch, HuggingFace, MMDetection