

# TAN WEI HAO



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## About Me

Motivated software engineering graduate with a focus on AI/ML. Proficient in Python, Java, C#, and PHP, with experience in machine learning and NLP. Passionate about developing AI Agent systems and continuously learning in the AI field. Highly adaptable and self-taught, eager to contribute to innovative AI solutions.

## Experience

### AI Solution Engineer (Fullstack)

#### TimeTec Cloud

- Implemented new features and resolved production bugs to enhance system stability and user experience.
- Developed and maintained a full-stack HR application using ASP.NET (C#) for backend and jQuery, Angular for frontend.
- Designed and implemented RESTful APIs for internal modules and third-party integrations.
- Optimized database queries and procedures for performance and reliability.
- Utilized Git for version control, collaborating effectively within teams to manage codebase, resolve conflicts, and ensure smooth deployment cycles.
- Experienced in fine-tuning large language models using Python with Unsloth (Hugging Face) for accelerated training with QLoRA, targeting Deepseek models for NLP applications.
- Developed an advanced AI-powered chatbot using OpenAI Agent SDK, leveraging Retrieval-Augmented Generation (RAG) and write custom prompt to handle complex, context-aware user queries.
- Implemented a custom knowledge base embedding pipeline and stored vector data in Qdrant, enabling efficient semantic search and response generation.

### Software Engineering Intern

#### Resort World Tech Lab - Genting Berhad

- Developed and trained a poker card detection model using YOLOv5 with PyTorch, optimized for real-time inference in casino games like Baccarat.
- Created a WPF-based Baccarat game using .NET Core, integrating AI-based card recognition for gameplay automation.
- Handled multithreading and UI events in WPF with Dispatcher, async/await, and Task for smooth real-time camera processing.
- Built a reusable .NET Class Library for card detection and data collection, and published it as a NuGet package for production use.
- Performed accuracy benchmarking and performance testing on AI model (FPS, latency, precision/recall metrics).
- Gained hands-on experience with MonoGame, learning core game loop structure, rendering, and input handling.

## AI Intern

### Footfallcam - Meta Research

- Created an image data collection pipeline using FastAPI, enabling efficient ingestion and processing of visual datasets.
- Built automation scripts using Selenium to extract geographic coordinates and integrate OpenAI (ChatGPT), Google Geocoding, and Bing Maps APIs.
- Conducted testing on ESP32-CAM, analyzing image blurriness and estimating age/gender using cloud-based face recognition APIs (e.g., Face++, Inferdo, Kairos).
- Trained CNN models (ResNet50, MobileNet) with Keras & TensorFlow to detect store open/close status from surveillance images.
- Applied PCA for dimensionality reduction and used SVD and regression analysis with Scikit-learn to model campaign effectiveness and predict sales outcomes.
- Resolved customer support tickets, ensuring quick turnaround and issue resolution.
- Experienced with Agile SCRUM methodologies for project planning and sprint-based development.

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## Projects

### Smart Lighting System

- Develop a prototype smart lighting system that smart enough to determine when to toggle on the home lightings using Raspberry Pi.
- 3 different functions developed for the system base on different situations by using different sensors.
- The functions included are voice-assistant light control, human face detection light control and smart lighting based on surrounding light level.

## Education

2021

**New Era University College**

**Bachelor In Software Engineering**

CGPA : 3.84

## Certifications

**Microsoft Azure Fundamentals (AZ-900)**

<https://learn.microsoft.com/en-us/users/tanweihao-5450/credentials/3fd5173eaa079830>

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### Language

- Chinese
- English
- Bahasa Melayu

### Computer Skills

- C#/.NET
- Python
- Java
- Javascript/Jquery
- PHP
- mySQL/NoSQL
- Github
- Keras TensorFlow/Pytorch
- Selenium

### Interpersonal Skill

- Self and fast learner
- Good time management
- Collaboration and Teamwork
- Good communication skill
- Able to work under pressure.