Tharsshen Govikrishnan

tharsshengovikrishnan@gmail.com | LinkedIn | GitHub | Portfolio

Education

Raffles University **Graduated: 2026**

Bachelor of Information Systems (Honours) in Artificial Intelligence *Johor, Malaysia*

- **CGPA: 3.85 / 4.00**

Work Experience

Independent / Self-Employed **May 2025 – Present**

Freelance AI Engineer & Full-Stack Developer *Remote*

- Delivered computer-vision and deep-learning pipelines for facial tracking, anti-spoofing, and **YOLO** object detection.
- Built AI web apps with **FastAPI/Flask**, **PyTorch**, React, TypeScript, **Supabase**, and automated data processing.

Raffles University **May – Jul 2026**

Research Assistant Intern *Johor, Malaysia*

- Built an EEG acquisition pipeline and collected **4,315 recordings** from **202 participants** using a consumer headband.
- Developed **Python** data-quality tools and evaluated sentence-decoding models, including on previously unseen sentences.

Godway Games (startup) **2023 – 2024**

AI Engineer *Remote*

- Built real-time **Python** player-tracking and motion analysis for a 3D Blender game, collaborating remotely under NDA.

Projects

Brain2Frame — EEG-to-Video System | *View project* **Python | BrainFlow | NumPy | Next.js**

- Integrated Muse 2 EEG, spectral features, an adaptive classifier, and Veo3 video generation in a live **Next.js** dashboard.

Dobot Chess-Playing Robot | *View project* **Python | YOLO | OpenCV | Dobot**

- Trained **YOLO** on custom-labelled chessboards; linked board recognition, chess-engine moves, and **Dobot** arm control.

Smart Attendance Tracking System | *View project* | *GitHub* **Python | OpenCV | SQLite | pandas**

- Built face-recognition attendance with liveness checks, **SQLite** logging, CSV reports, and ROC/AUC analytics.

YOLO Currency Detector | *View project* **Python | YOLO | OpenCV**

- Fine-tuned **YOLO** on a custom-labelled, augmented dataset to detect six Malaysian Ringgit banknote denominations.

Research & Publications

Cognitive Engagement as a Gating Mechanism for Semantic Recoverability in EEG-Derived Manifolds | *PDF*

- Co-author and presenter, ICSSA 2026 (UTM).

Brain2Frame-SID: A Large-Scale Consumer-Grade EEG Dataset for Sentence-Level Semantic Imagination Decoding | *PDF*

- First author; **publication in progress**.

Leadership

President, Raffles University Digital Technology Club **Oct 2024 – Oct 2025**

- Organized **10+ events** and workshops; grew the club's following from **46 to 112**.

Technical Skills

AI & vision: Python, PyTorch, TensorFlow, scikit-learn, YOLO, OpenCV, MediaPipe

Applied AI: Signal processing, feature extraction, model evaluation, LLM integration

Applications: FastAPI, Flask, React, TypeScript, Supabase, SQL