# Brian Tham

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## Education

**Singapore Institute of Technology**  —  August 2023 – April 2026, Singapore
B.Sc. (Hons), Applied Artificial Intelligence. GPA: 4.41/5.00
- Relevant Coursework: Mathematics 1 & 2, Machine Learning, Computer Vision and Deep Learning, Large Language Models, Data Structures and Algorithms, Cloud Computing and Big Data

**Tallinn University of Technology**  —  July 2025 – July 2025, Tallinn, Estonia
Intensive Programme in Cybersecurity
- Visits to NATO CCDCOE, CR14, Maritime Cyber Security Centre, and Clarified Security

**FPT University**  —  August 2024 – August 2024, Da Nang, Vietnam
Short course in Computer Vision and Deep Learning
- Achieved Best Accuracy of Model award

**Singapore Polytechnic**  —  April 2018 – April 2021, Singapore
Diploma in Information Technology – Game Development
- Relevant Coursework: AI & Machine Learning

## Experience

**Agency for Science, Technology and Research, Institute for Infocomm Research (I2R)**  —  September 2025 – April 2026, Singapore
A*STAR Research Internship Award (ARIA)
- Researching on Foundation Models, Vision Foundation Models, Vision-Language Foundation Models, Image super-resolution and denoising
- Diagnosed and resolved complex multi-GPU workstation boot issue, applying systems-level hardware troubleshooting to minimize research downtime
- Provided technical support for research compute infrastructure, leveraging deep hardware knowledge from personal PC building experience

**Singapore Institute of Technology**  —  September 2024 – December 2024, Singapore
Research Assistant
- Researched and conducted literature review on AI Model Security
- Implemented UNet model for brain MRI segmentation

**Ministry of Defence**  —  October 2021 – August 2023, Singapore
Admin Support Assistant (National Service)
- Automated data processing and visualization, condensing a 24-hour procedure into 30 minutes with PowerBI
- Performed comprehensive data cleaning and validation on raw operational logs in Excel

**Lee Kong Chian School of Medicine**  —  September 2020 – February 2021, Singapore
Digital Learning Intern
- Boosted tests scores by 20% through tailored e-learning solutions
- Spearheaded the digital transformation of anatomy reference materials
- Developed e-learning game with single and multi-player learning options

## Projects

**Multimodal LLM Profanity Detection**                                   nightey3s-profanity-detection.hf.space

- Multimodal and context-aware profanity detection and detoxification
- Dockerized and deployed on HuggingFace as a web application

nightey3s-foodvision.hf.space

**FoodVision – Deep Learning Food Detection System**

- Web-based real-time food detection system utilizing YOLOv8

ser.tham.ai

**Speech Emotion Recognition using Wav2Vec2**

- Achieved 69.02% accuracy on IEMOCAP dataset

## Technical Infrastructure & Hardware Experience

**Built and configured a personal desktop and a home media server**

- Running Tailscale, Jellyfin, and a multi-service *ARR stack for 24/7 service and remote connections
- Implemented storage pooling and caching to optimize media serving and data access
- Personal Desktop: 10-core 10th Gen Intel i9-10900K & RTX 3090 Ti; gaming and deep learning workstation
- Home Media Server (HP EliteDesk 800 G5): 6-core 9th Gen Intel i5-9500; for transcoding media with Intel QSV

**Cross-platform proficiency**

- Experience with Windows, Linux (Ubuntu), and MacOS environments; perform hardware diagnostics and firmware updates to ensure stability

**Hardware maintenance and upgrades**

- Performed preventative hardware maintenance on desktops and servers, including thermal paste replacement, dust cleaning, RAM/SSD upgrades, and BIOS updates to maintain optimal performance

## Skills & Interests

**Technical**: Python, R, C, C#, C++, PyTorch, Tensorflow, Docker, Git, GCP, AWS, PowerBI, Linux

**Language**: Native English and Conversational Chinese

**Certifications**: Google Cloud Certified – Professional Machine Learning Engineer