Fakhrul Fauzi

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Computer Engineering graduate specializing in Computational Intelligence, with hands-on experience in deep learning, NLP, and computer vision. Proven ability to design, train, and deploy AI models—from document collaboration agents (CollabGPT) to embedded vision systems (STM32 AI). Passionate about optimizing ML workflows and delivering scalable AI solutions. Recognized for innovation (Bronze Medal, INOTEK) and academic excellence (Dean's List).

EDUCATION

Universiti Teknikal Malaysia Melaka (UTeM), Malacca, Malaysia
Bachelor of Computer Engineering with Honours *Sep 2021–Present*
CGPA: 3.50 — Key Courses: AI, Computer Vision, Image Processing, Operating Systems, HPC, Computer Network Systems, Embedded Systems

Center of Foundation Studies (UiTM), Dengkil, Malaysia
Foundation in Science *Jun 2020–Apr 2021*
CGPA: 3.45 — Focus: Mathematics, Physics, Chemistry

SKILLS

Languages:	Python, Swift, C++, JavaScript, C#, HTML, CSS
Frameworks/Tools:	TensorFlow, Scikit-learn, CoreML, Flask, OpenCV, Create ML, GitHub, ChatGPT
Platforms:	Docker, Firebase, NodeJS, Linux, Windows, macOS

PROJECTS

DocuMind – AI-Powered Knowledge Base Assistant (RAG, LLM, FastAPI, Python) *June 2025*
- Developed a privacy-focused, self-hosted AI assistant that enables users to extract insights from PDF documents using local LLMs.
- Built a hybrid retrieval system combining semantic search (Sentence-Transformers) and keyword matching for accurate, contextual answers.

smAIrtColorizer – AI Image/Video Colorization (Python, Flask, TensorFlow, Swift) *Apr 2025*
- Implemented deep learning models to colorize grayscale images/videos; deployed in a native iOS application.
- Integrated TensorFlow models with Flask backend and Swift UI for real-time media processing.

QuranicJar – Emotion-aware Quranic Recommendation (NLP, Swift) *Mar 2025*
- Built NLP-driven app to classify user emotions and retrieve Quranic verses using CoreML/Create ML.
- Fine-tuned native ML models for emotion prediction.

STM32 AI – Embedded AI for Image Recognition (ML, Embedded Systems) *Apr 2024*
- Deployed lightweight image classifiers on STM32 microcontrollers using Teachable Machine and STM32Cube.
- Implemented real-time object detection on low-powered embedded systems with 80%+ inference accuracy.

RasaRadar – Malaysian Food Classification App (Vision, ML, Swift) *Mar 2025*
- Developed a mobile app using CoreML and Vision frameworks to identify local cuisines via image input.
- Achieved 94.2% training accuracy and 93.2% validation accuracy in Malaysian food classification.

EXPERIENCE

Engineer Intern, SMK Electronics (M) Sdn Bhd *Jul 2024–Sep 2024*
- Developed a barcode inspection system for future deployment to reduce manual errors and tact time.
- Enhanced an LCD Vision Inspection system for real-time defect detection in PCB manufacturing; reducing PCB defect inspection time by 14% saving RM2,663 annually

CERTIFICATIONS

IBM Machine Learning Specialization *IBM, Apr 2025*
- Learned regression, classification, clustering, and deep learning in Python; developed models with 90%+ accuracy on real-world datasets.

AI for MY Future *Microsoft & Mereka, Apr 2025*
- Gained proficiency in Microsoft's AI tools, responsible AI practices, and generative AI applications for business solutions.

My5G Pioneers Programme *Ericsson Malaysia, Apr 2025*
- Completed training in 5G integration with AI, IoT, and edge computing for real-time ML inference in industrial settings.

HONORS & AWARDS

- **Entrepreneurship Award** – iNOTEK Innovation Competition, UTeM (Jun 2025)
- **Industry Award** – Vi-Show 2025: Vision Showcase, UTeM (Jun 2025)
- **Bronze Medal** – iNOTEK Innovation Competition Competition, UTeM (Jun 2024)
- **FTKEK Dean's List** – 4 Consecutive Semesters (2022–2024)