SAIFUL AZREE BIN SAIFUL AZMI

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PROFILE

Computer Engineering students with hands-on experience in programming and computer vision projects. Passionate about applying image processing and machine learning techniques to solve real world problems and continuously improving technical skills. In addition to computer vision, I am also eager to work in any role related to computers, programming, and engineering, where I can contribute my skills and continue learning.

EDUCATION

Universiti Teknikal Malaysia Melaka (UTeM), Melaka

Master of Science in Electronic Engineering — **November 2025 - Present**

Bachelor of Computer Engineering with Honours — **September 2021 – September 2025**

Pahang Engineering Matriculation College

Engineering Major — **July 2020 – July 2021**

CERTIFICATION

Graduate Engineer by Board of Engineers Malaysia (BEM)

- Registered as a Graduate Engineer in the branch of Computer Engineering.

Level 1 TRIZ Practitioner by The Malaysia TRIZ Innovation Association

- A workshop on the Theory of Inventive Problem Solving (TRIZ), a systematic methodology for innovation.

MongoDB Certification

- Getting Started with MongoDB Atlas
- MongoDB and the Document Model
- Connecting to a MongoDB Database
- MongoDB CRUD Operations: Insert and Find Documents
- MongoDB CRUD Operations: Replace and Delete Documents

WORK EXPERIENCE

Institut Penyelidikan dan Kemajuan Pertanian Malaysia (MARDI)

Assistant Research Officer Intern **July 2024 – September 2024**

- Designed an image recognition of chilies based on their maturity index.
- Implemented YOLO object detection algorithm into the image recognition of chilies.
- Achieved a moderate performance result of the object detection which is average of 70% on F1-score and mean average precision (mAP).
- Led the team during data collection session of lettuce images for object detection dataset with average of 400 images for each class of lettuce growth levels.

PROJECTS

MindSight: Facial Emotion Recognition for Mental Health Monitoring

Artificial Intelligence, Machine Learning, Convolutional Neural Network (CNN), PyTorch, OpenCV

- Implemented an EfficientNet B0 architecture for feature extraction and included self-assessment questionnaire (PHQ-9 and GAD-7) to validate the person's emotional and mental health.
- Built a real-time interface using OpenCV for the automated face expression recognition system for mental health recognition.

Analysis of Monitoring the Growth and Health of Lettuce Using YOLOv9

Artificial Intelligence, Deep Learning, YOLO Algorithm, Roboflow, Google Colab, OpenCV

- Created own dataset using Roboflow and applied YOLOv9 object detection algorithm to develop the lettuce's growth and health monitoring.
- Achieved high performance marks for the object detection model which is 85% on F1-score and 94% for mean average precision (mAP).

SKILLS

Machine Learning and Deep Learning:

- Object Classification (Intermediate)
- Object Detection (Intermediate)
- Semantic Segmentation (Basic)

Programming Languages:

- C++ (Intermediate)
- Python (Intermediate)
- NodeJS (Basic)
- Verilog (Basic)

Digital Literacies:

- Microsoft Word (Advanced)
- Microsoft Excel (Intermediate)
- Google Suite (Intermediate)
- AutoCAD (Basic)

Soft Skills:

- Teamwork
- Work Ethic
- Adaptability
- Detail oriented

ACHIEVEMENTS AND INVOLVEMENTS

Kuala Lumpur International Invention & Innovation Symposium 2025

- Carried out the *MindSight: Facial Emotion Recognition for Mental Health Monitoring* project represented faculty.
- Achieved gold medal in futurist category.

INOTEK SIRI II Fakulti Teknologi Dan Kejuruteraan Elektronik Dan Komputer 2025

- Presented the *Analysis of Monitoring the Growth and Health of Lettuce Using YOLOv9* project.
- Achieved bronze medal in system engineering category.

Arduino and IoT Learning Program with Melaka Technical School 2024

- Built a Smart Dustbin with IoT than can open the lid by itself using a sensor and give a notification to the connected device when the dustbin is full.
- Became an instructor on the program and teach the technical school's students about the Arduino and IoT.

REFERENCES

Name: TS. DR. MUHAMMAD NOORAZLAN SHAH BIN ZAINUDIN
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Name: TS. DR. AFIFAH MAHERAN BINTI ABDUL HAMID
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