

Mazen Omar Mohamed

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CAREER OBJECTIVE

I am a dedicated and results-driven mechanical engineering graduate from Universiti Teknologi Malaysia (UTM), committed to excellence and continuous improvement. With a strong academic foundation and practical experience in applying engineering principles to real-world challenges, I actively pursue opportunities to innovate, solve problems, and contribute effectively to multidisciplinary teams. I am passionate about leveraging my technical expertise and hands-on skills to drive meaningful impact in the field of mechanical engineering.

EXPERIENCE

Intern Developer/ Technical Engineer Oct 2024 – March 2025

High-Speed Reacting Flow Research Laboratory (HiREF) collaboration with Petronas UTM, JB

- Optimizing the existing testing rig and modify it to be suitable for other environmental factor.
- Directed and trained new joiners to make them familiar with the project.
- Analyzed problems and offered mechanical solutions to existing problems.
- Build a thermo modeling system to analysis and predict the corrosion.

Intern Engineer Jul. 2024 – Oct. 2024

High-Speed Reacting Flow Research Laboratory (HiREF) UTM, JB

- Built and designed a testing rig for CUI (corrosion under insulation).
- Built a monitoring system to measure temperature , humidity and pressure that send to an app using IOT system.
- Monitored progress of projects and reported any issues to senior managers.
- Worked closely with project managers and engineers to ensure project needs were fulfilled and budgets were honored.

Assistant Researcher Jul. 2023 – Oct.2023

Universiti Teknologi Malaysia UTM, JB

- Project Focus: Developed a monitoring and control IoT system for a Nutrient Film Technique hydroponics setup, integrating renewable energy and IoT technologies.
- Collaborated with designers to understand product specifics, and worked to ensure a proper fabrication process.
- Required proficiency with micro-controller boards, sensor calibration, and IoT integration.
- Assisted with programming and design of the App

EDUCATION

Universiti Teknologi Malaysia (UTM) Skudai, JB

Bachelor of Mechanical Engineering with Honors (CGPA: 3.87 / 4.00 1st Class student) Sep. 2020 – May 2025

PROJECTS

Camera Based Autonomous Car | *Python, YOLO, SolidWorks, Raspberry Pi* Oct 2023 – Feb 2025

- Integrated Raspberry Pi with YOLOv8 and Camera System by Achieving real-time object detection for road signs, traffic lights etc using YOLOv8.
- Enhanced Depth Sensing with Lidar and Depth Camera by improving obstacle detection and distance measurement for better navigation.
- Designed a 1/10 Scale Smart City Model for testing autonomous vehicle performance.

Self Cleaning Sun Tracking Solar Panel | *Fritzing, SolidWorks, Arduino IDE* March 2023 – June 2023

- Designed a stable tetragonal pyramid base model using SolidWorks for mounting a commercial solar panel and the cleaning system
- Utilized a closed loop data collection system using LDR's, Linear Actuators and brush-less DC motors to align solar panel surface by tilting to be perpendicular to the sunlight.
- Utilized Arduino IDE for a simple script to allow device to continuously monitor intensity of sunlight and use rotation or tilt to align itself

Developed a personal website for showcasing projects | *HTML, CSS, Visual studio* July 2023 – August 2023

SKILLS

Languages: Python, C/C++, HTML/CSS,

Technical Skills:: ROS, Matlab, SolidWorks, Fritzing Git, VS Code, Visual Studio, Yolo, MQTT, Auto CAD, Abaqus

Technical Platforms: Raspberry Pi, Arduino, ESP

Soft Skills: Communication Skills, Teamwork, Creative Problem Solving, Decision Making , Leadership, Adaptability, Ability to Work Under Pressure, Multitasking