ARUM BULAN WIJAYANTI GUNAWAN

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PROFILE:

- Awarded Distinction in MSc Electrical Engineering and Renewable Energy Systems by the University of Leeds
- Knowledgeable in C for building software for embedded systems such as IoT using Arduino, ESP microcontrollers and smart metering software
- Successful track record of completing projects from inception phase to execution phase whilst working in small to medium-sized agile teams
- Confident communicator and strategic thinker, eager to acquire new skills and expand existing ones whilst being in line with industry best practices.

PROFESSIONAL WORK EXPERIENCE:

Mo-Sys Engineering, London **May 2022 – Present**

Junior Electronics Engineer

- Designing, developing, and testing components, devices, systems, and equipment for existing technologies
- Creating schematics and PCB layout designs for new products using Altium Designer
- Liaising with engineers and different divisions as part of an agile team
- Finding faults and rectifying issues
- Ensuring safety regulations are met.

PT Pertamina, Jakarta **July 2019 – September 2019**

Health Safety Security Environment (HSSE) Marketing Intern

- Collected electrical components' data including machines, cables, and protection components in the Plumpang refuelling terminals
- Evaluated and analysed the load flow of a fuel station using ETAP simulation in rush, normal and emergency cases
- Solved potential faults/problems and proposed protection system improvement by considering zone 0, 1, and 2 suitable equipment in written reports, enhancing my attention to details
- Organized discussions with technicians and supervisors for data collection and fault diagnosis.

School of Engineering University of Indonesia, Jakarta **August 2017 – January 2018**

Electric Fundamentals Course Lecturer Assistant

- Assisted senior lecturer in reviewing assignments and preparing course material in line with the school's curriculum
- Delivered reports and assignment results on time following the deadlines
- Analysed and ensured that student submission was in line with the university regulatory standards
- Conducted data analysis based on student feedbacks and collated results in order to restructure course materials
- Communicated effectively with lecturer in order to ensure students were fairly represented regarding any issues they found within the course
- Conducted a presentation to facilitate students a tutorship regarding the course.

ACADEMIC PROJECTS:

LoRa Based Smart Metering

- Final year project chosen for the BEng electrical engineering course funded by Indonesia's public utility company (PLN)
- Built backend in C using Arduino and ESP for LoRa telecommunication, capable of sending and collecting data within a 5 km radius which reduced company operational costs by a third while increasing profits by 50%
- Developed a database and remote monitoring system using InfluxDB and Grafana.

Solar Powered Submersible Pumps Penetration

- Worked on a collaborative charity project between the University of Indonesia and Indonesia's public utility company (PLN) to provide fresh water for local communities in a former Tsunami area, Ujung Kulon
- Installed solar panels connected to a water pump on the community centre's rooftop
- Decreased water-borne diseases infected people by 50% within a month.

Bidirectional DC-DC Converter EV Charging System

- Individual project for MSc course
- Implemented MATLAB software for Maximum Power Point Tracking (MPPT) for solar panels, battery charging controllers, and automation of electric vehicle (EV) charging systems based on priority control
- Bidirectional DC-DC converters used to allow bidirectional power flow between solar panels and batteries, enabling solar panel assisted EV charging system and Vehicle-to-Vehicle (V2V) for fast charging.

ASEAN MATE Underwater Robot Competition

- Came 1st place out of 25 teams for the explorer category
- Led the electric division of a robotic team to build a Makara 08 Mark II underwater robot with a remote-control system.
- Designed and developed Altium design of multilayers PCB to connect CPU and Blue Robotics thruster, developing problem-solving skills.
- Robot lasted for 25 minutes in 5 meters depth, while detecting sunken objects such as a miniature prehistoric cannon and measuring the cannon's dimension before it was raised to the surface in a reservoir.

ACHIEVEMENTS:

- Awarded 1st place in ASEAN MATE Underwater Robot Competition for Explorer Category.
- International Masters Engineering and Computing Scholarship awardee.
- Digital Talent Scholarship for Data Science awardee.
- Improvement of Academic Achievement (PPA) Scholarship awardee.
- Project Officer of Electrical Engineering Charity Program.

KEY SKILLS:

Technical knowledge:

- **Programming:** Experienced in MATLAB and C/C++ and developed knowledge of Java and Python.
- **Software:** Experienced in building software for embedded systems such as IoT using Arduino and ESP microcontrollers.
- **DataBase:** Built monitoring system for smart metering using InfluxDB and Grafana.
- E**lectrical Design:** Proteus, Simulink, ETAP, Altium, DigSILENT, Eagle.

Soft skills:

- **Leadership** – Successfully led a robotic electrical team to 1st place on the underwater robot competition.
- **Communication skills** – Developed whilst at Pertamina when discussing faults with technicians verbally and written. Part of a medium-size agile team of robotics.
- **Problem Solving** – Pertamina required excellent fault diagnosis and enhanced my attention to detail. Developed whilst designing multilayers of PCBs.

Language knowledge:

- English (Proficient)
- Indonesian (Native)

EDUCATION:

2020-2021	**University of Leeds** MSc Electrical Engineering and Renewable Energy Systems – **Result:** Pass with Distinction
2016-2020	**University of Indonesia** BEng Electrical Engineering – **Result:** 3.57/4.00 GPA

REFERENCES:

Available upon request.