Rafza Ray Firdaus

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EDUCATION

Bandung Polytechnic for Manufacturing – Bandung, Indonesia
Bachelor of Applied Science, Majoring in Automation Engineering (June 2020 - December 2024)
Subject-specific expertise:
- Control System and Modelling
- PLC and SCADA/MES System
- IoT and Embedded System
- Machine Learning and Software Engineering

Chung Yuan Christian University (中原大學）– Taoyuan, Taiwan
Exchange Student (September 2022 – January 2023)
Activities and Achievement:
- Exchange student at Chung Yuan Christian University (中原大學), Department of Mechanical Engineering.
- Experiment: "Optimization of Machining Parameters for Surface Roughness in Milling Machine."
- Moldex3D CAE Basic Training Certification (40 hours): Gained foundational skills in using Moldex3D software for simulating (CAE) plastic injection molding processes, including material flow and cooling analysis for optimizing product quality.
- Techman Robot Training Certification (40 hours): Trained in programming and operating collaborative robots (cobots) for industrial automation, focusing on motion control, vision system integration, and safe human-robot interaction.

PROFESSIONAL EXPERIENCE

Bandung Polytechnic for Manufacturing – Bandung, Indonesia
Internship (August 2023 – October 2023)
Job Desc and Activities:
- Mentoring students in hands-on laboratory practice.
- Development and enhancement of learning modules.
- Equipment maintenance and machine repair for campus machinery and lab facilities.
- Participation in the production team for teaching-aid production for industrial clients.

BANGKIT ACADEMY 2023 BATCH 1 – Bandung, Indonesia
Intensive Training - MSIB: Machine Learning Learning Path (February – August 2023)
Key Activities:
- Bangkit is a google-led intensive training program, designed to prepare students with in-demand skills and tech certifications, including machine learning.
- Developed core AI and Machine Learning skills and applied them in a real-world product-based capstone project for an EdTech company focused on sustainability.
- Obtained TensorFlow Developer Certification.

CERTIFICATES

- **Tensorflow Delevoper Certificate** – Demonstrates proficiency in building and deploying machine learning models using TensorFlow.
- **Electrical Maintenance Junior Engineer –** Certified in fundamental knowledge and skills in electrical maintenance, including basic troubleshooting, safety procedures, and understanding of electrical systems. Designed for entry-level professionals in the field of electrical maintenance.
- **Moldex3D CAE Basic Training Certification** – Verified training in computer-aided engineering (CAE) simulation for mold design and manufacturing.
- **Techman Robot Training Certification** – Certified in robotics operation and automation, specifically Techman robots.
- **CYCU Exchange Program Certificate** – Successfully completed an academic exchange program at Chung Yuan Christian University, Taiwan.
- **TOEIC (Listening & Reading) – Score: 790** – Certification of English language proficiency in an academic and professional context.

TECHNICAL EXPERTISE

- **Automation Engineering**: Proficient in PLC programming, HMI design, electrical wiring, PCB design, and microcontroller integration. Hands-on experience with control systems and automation tools.
- **Modeling & Simulation**: Skilled in MATLAB for system modeling and simulation. Experienced in Moldex3D for CAE simulation in manufacturing processes. Proficient in SolidWorks for 3D modeling and design.
- **CNC Operation**: Experienced in operating and programming CNC machines for precision manufacturing.
- **Programming Languages**: C/C++, Python, SQL, and Go, with experience in building and deploying machine learning models using FastAPI.
- **Machine Learning & AI**: Proficient with TensorFlow and PyTorch for developing and deploying machine learning models. Familiar with end-to-end ML pipelines and AI applications.
- **Version Control & Collaboration**: Experienced with Git for source code management and collaborative development workflows.

LANGUAGE PROFICIENCY

- Indonesian *(Native Proficiency)*
- English *(Professional Working Proficiency)*
- Mandarin Chinese *(Elementary Proficiency)*