Muhammad Sukry

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CAREER SUMMARY

I am a fresh graduate of Electrical Engineering with extensive experience in Digital Control Laboratory, work/internship experiences, organizational roles, and other researches/projects. I possess strong leadership skills, critical thinking, the ability to learn quickly and independently, and finding the fastest solutions to problems. Aiming to contribute to various industries using agile methodology.

EDUCATION

Bachelor of Electrical Engineering, Andalas University, Padang | Aug 2020 – Aug. 2024

- GPA: 3.76/4.00 (148 Credits)
- Developing a strong understanding of Control Systems, Instrumentation, Digital Electronics, SCADA and Programmable Logic Control necessary for success in the field of engineering.
- Relevant Courses: Robotics, Control System, Signals and Systems, Internet of Things, and Data Communication, Distribution System.
- Final Project: Control Analysis of Single Machine Infinite Bus System with Power System Stabilizer Using Backtracking Search Algorithm Method.

PROJECT AND RESEARCH EXPERIENCE

Design and Development of a Prototype Dosing Machine

• A project under professional mentorship, focusing on the integration of electrical design, PLC programming, HMI development, and web connectivity based on real industrial case studies.

Industrial Automation Project, Advisor: Mouhammad Hamsho (Senior Software Engineer of Esterer WD GmbH)

Self-funded, September – November 2024

Design and Development of a Prototype Box Wrapper

• A project under professional mentorship, focusing on the integration of electrical design, PLC programming, HMI development, and web connectivity based on real industrial case studies.

Industrial Automation Project, Advisor: Mouhammad Hamsho (Senior Software Engineer of Esterer WD GmbH)

Self-funded, October – November 2024

Design and Development of a Web-Based Application (My Itinerary)

• A project focused on designing and prototyping a web-based travel recommendation system using machine learning, incorporating Agile methodologies for iterative improvements and feedback integration, and optimizing models with Recommender Net to enhance accuracy and personalization.

Indonesia NEXT Program, University of Andalas, Advisor: Margarita Tan (Chief of Growth CAKAP)

Funded by Indonesian Telecommunications Company (TELKOMSEL), June 2024 – October 2024

Design and Development of an Automatic Tank Filling and an Automatic Mixing Tank

• A project under professional mentorship, focusing on the integration of electrical design, PLC programming, HMI development, and web connectivity based on real industrial case studies.

Allen Bradley Project, University of Andalas, Advisor: Zulhamdi (dedy plc)

Self-funded, October – November 2024

Designing Manufacturing With Artificial Intelligence, Data Acquisition, And Big Data Analysis For Agricultural Drones, Plantation Mapping, And Forestry.

• Optimized AI-driven drones for agriculture, boosting efficiency by 10% and leading quality control initiatives.

MSIB Program, University of Andalas, Advisor: Ninda Mayesza (Full Drone Solutions)

Funded by Ministry of Education, Culture, Research, and Technology of Indonesia, January – June 2024

Lillung: a Pediatric Pneumonia Classification Application using ResNet50, achieving accurate and reliable disease detection.

• Developed AI projects in CV, NLP, and DS, enhancing system reliability, optimizing ML pipelines, and ensuring data safety.

MSIB Program, University of Andalas, Advisor: Ebedia Hilda (AI Instructor)

Funded by Ministry of Education, Culture, Research, and Technology of Indonesia, August – Desember 2023

Design and Simulation of a SMIB Control System with PSS Optimization

• Developed and optimized a control system using BSA for SMIB based on real case studies from BARKA II (Oman) and IEEE Std 421.5™-2016. ensuring stability and efficiency under variable loads.

Bachelor's Thesis, University of Andalas, Advisor: Ir. Heru Dibyo Laksono, S.T., M.T. (Lecturer)

Self-funded, January – June 2024

Design an IoT System for Vannamei Shrimp Farming in Pasir Jambak Beach – Padang

• Developed and tested an MQTT-based IoT system to optimize shrimp farming operations.

Electrical Engineering Design, University of Andalas, Advisor: Ir. Heru Dibyo Laksono, S.T., M.T. (lecturer)

Self-funded, September 2023 – January 2024

CARBONFENCE: A Deep Learning-Based Carbon Footprint Control Concept Integrated IoT Analysis for Conventional Vehicles Towards Indonesia's Net Zero Emission 2060 Goal

Student Creativity Program, University of Andalas; Advisor: Dr. Eng. Dendi Adi Syaputra, S.T., M.T. (lecturer)

Funded by Ministry of Education, Culture, Research, and Technology of Indonesia, June – November 2023

Design an IoT Prototype for Soil Suitability in Corn Farming

• Developed and tested an HTTP-based IoT system for research and community service applications.

GemasTIK Program, University of Andalas, Advisor: Prof, Dr. Eng. Ir. Muhammad Ilhamdi Rusydi (lecturer)

Funded by Ministry of Education, Culture, Research, and Technology of Indonesia, October – January 2023

SKILLS

- **Programming Languages:** C, Python, JavaScript.
- **PLC Programming:** Ladder Logic, FBD, STL, dan SCL.
- **IIOT (Industrial Internet of Things) integration:** Node-RED.
- **Communication protocols:** MQTT, OPC UA.
- **SCADA:** Experience in SCADA systems utilizing WinCC, Ignition.
- **HMI design:** Siemens WinCC, Factory TalkView.
- **Engineering programs:** ETAP, AutoCAD, MATLAB, InstruCalc.
- **Soft skills:** Problem solver, Analytical thinking, Communication, Presentation, Leadership, Adaptability, Collaboration, Research and Development.
- **Language**: Indonesia, English

PROFESSIONAL EXPERIENCE

Digital Solutions Engineer | IndonesiaNext Program | Telkomsel | Jun. 2024 – Oct. 2024
- Increased project efficiency by 40% by implementing an AI-based automation system for travel plan management, saving 20 work hours per month.
- Increased digital skills proficiency by 30%, applying data visualization for effective communication.
- Utilized Scrum methodology for systematic product and project management using agile method.

Control Engineer| MSIB Program | PT. Karya Solusi Angkasa, Yogyakarta | Jan. 2024 – Jun. 2024
- Improved electronic system design and battery management, increasing drone performance efficiency by 10%.
- Led quality control initiatives, enhancing team leadership and project management skills.

Electrical Engineering Intern | PT PLN (Persero), Tbk., Padang | Oct. 2023 – Nov. 2023
- Ensured and enhanced the reliability of electrical components by executing corrective maintenance and troubleshooting, optimizing system efficiency while adhering to stringent safety protocols.

- Developed strong competencies in interlocks, system logic, and wiring diagrams to support substation safety and functionality; documented technical findings and procedures to aid in system diagnostics and future maintenance tasks.

AI Engineer | MSIB Program | PT. Orbit Future Academy, Jakarta | Aug. 2023 – Des. 2023
- Enhanced model reliability and system performance by executing data analysis, debugging, and optimizing machine learning pipelines, adhering to stringent development and data safety protocols.
- Built strong competencies in NLP, computer vision, and system logic, supporting model accuracy and functionality; documented technical insights and coding procedures to facilitate diagnostics and future enhancements.

Assistant | Digital Control Laboratory, Padang | Sep. 2021 – Jul. 2024
| Research and Development Coordinator | Oct. 2023 – Jul. 2024
- Developed expertise in Automation and Instrumentation through comprehensive training, workshops, and hands-on P&ID applications.
- Led research training with Automation specialists to enhance knowledge transfer.
- Mastered advanced concepts in Optimization Control, PLC, Ladder Logic, FBD, SFC, HMI, and Process Control.

| Laboratory Practicum Coordinator | Oct. 2022 – Oct. 2023
- Organized and streamlined the Electrical Engineering Department's Laboratory Practicum at Andalas University, enhancing coordination by managing and reporting schedules.
- Initiated and directed a new practicum module focused on motor analysis and control using PID controllers, boosting student engagement and practical learning outcomes.

| Assistant Member of Maintenance | Sep. 2021 – Oct. 2022
- Ensured optimal performance of lab equipment through rigorous testing and regular maintenance, ensuring high operational standards.
- Improved productivity and adherence to project milestones by effectively communicating laboratory schedules and adjustments to faculty members.

Machine Learning Intern | Neotelemetri, Padang, Indonesia | Feb. 2022 – Sep. 2022
- Acquired skills in Data Science, focusing on Natural Language Processing, Computer Vision, Data Exploration, Augmentation, and Visualization.
- Developed capabilities in Classification, Clustering, Modeling, and Deployment, preparing for real-world data science challenges.

XXVII Ordinary Member | HMTE FT UNAND, Padang, Indonesia | October 2021 – Now
- Directed advanced mentoring sessions in Control Systems, specifically on topics such as root locus and system control, enhancing student comprehension and technical skills.
- Delivered impactful presentations on Signals and Systems that emphasized foundational principles and system modeling, sharpening analytical skills of peers.
- Gained proficiency in essential electrical engineering tools like ETAP, RsLogix5000, FactoryTalkView, TIAPortal, and MATLAB, preparing for advanced applications in industry settings.

CERTIFICATIONS AND COURSES

Workshop Custody Transfer for Natural Gas	**Instrument Control System Academy**, Nov. 2024
Mechatronics and Industrial Internet of Things	**Code</>Compile**, Nov. 2024
Know Read Understand Piping & Instrumentation Diagrams P&IDs	**Udemy**, Nov. 2024
From Wire to PLC, A Bootcamp in Industrial Automation	**Udemy**, Nov. 2024
Microsoft Office Specialist: Excel Associate (Excel 2019)	**Microsoft**, Jul. 2024
Basic Health, Safety, and Environment	**Mita Training**, Jun. 2024
Electronics, Sensing and Control Drone	**PT. Karya Solusi Angkasa**, Jan. 2024
Basic Instrumentation	**Instrument Control System Academy**, May 2024
PLC Allen Bradley	**Instrument Control System Academy**, Apr. 2024
AI 4 Jobs	**PT. Orbit Ventura Indonesia,** Jan. 2024
Basic Project Management Electrical and Instrumentation	**Engineering Academy**, Sep. 2023
Schneider PLC M221 Configuration and Programming	**Engineering Academy**, Sep. 2023
Pinch Analysis & Heat Exchanger Network (HEN) Design	**Engineering Academy**, Sep. 2023
Scripting Logika & Data Logging pada WinCC Explorer	**Creative Station**, Sep. 2023
Merancang Desain & Animasi Object Dengan WinCC Explorer	**Creative Station**, Sep. 2023
Eksplorasi Tag dan Numeric Field Scada WinCC Explorer	**Creative Station**, Sep. 2023