

IMMANUEL MARUDUR MANIHURUK

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Sidikalang, North Sumatera

Instrumentation and Control Engineering student with a strong understanding of electronic circuit design and control system analysis. Interested in industrial technology and automation development, and actively honing skills through projects and independent learning. Possesses analytical skills, attention to detail, and a strong passion for contributing to technical innovation.

Education

Universitas Gadjah Mada - Yogyakarta, Indonesia

Aug 2023 - Aug 2027 (Expected)

Bachelor of Applied Science in Instrumentation and Control Engineering, 3.62/4.00

SMA Negeri 1 Sidikalang - Sidikalang, North Sumatera

Jul 2020 - Apr 2023

Department of Mathematics and Natural Sciences

Organizational and Committee Experience

Naposo Bulung HKBP - Yogyakarta

Jun 2024 - Present

Public Relations Division Coordinator

- Responsible for managing internal and external communications for the church organization.
- Coordinate the dissemination of information about activities, build good relationships with congregations and communities, and manage social media and church publications.
- Lead the publication and documentation team to ensure that every activity is well documented and published.
- Serve as a liaison between the ministry team and the congregation to ensure that information is communicated effectively and in a timely manner.

Paskah Mahasiswa Kristen UGM - Yogyakarta

Apr 2025 - May 2025

Equipment and Decoration Division Staff

- Responsible for preparing, organizing, and decorating all Easter event logistics, from selecting visual themes to arranging the space.
- Coordinate with other divisions to ensure that equipment is available on time and in accordance with technical requirements.
- Play an active role in creating an atmosphere that supports the solemnity and meaning of the celebration.

Natal Naposo Bulung HKBP 2024 - Yogyakarta

Oct 2024 - Jan 2025

Chief Executive

- Leading and coordinating the entire committee team in organizing, managing, and ensuring the success of the church's Christmas events.
- Responsible for activity planning, task distribution, inter-division communication, and activity reporting to the church.
- Successfully created structured, participatory events that had a positive impact on the congregation.

Natal Naposo Bulung HKBP 2023 - Yogyakarta

Oct 2023 - Dec 2023

Prayer and Care Division Staff

- Supports spiritual activities by organizing and leading prayer sessions during the Christmas event series.
- Acts as a caregiver by ensuring the emotional and spiritual well-being of the committee and participants through personal approaches, prayer support, and spiritual guidance.
- Coordinates with the liturgy team and other committees to maintain a conducive and loving atmosphere during the event.

Expertise

Technical

- CAD Design (Inventor, SolidWorks, and Fusion 360)
- Designing analog and digital electronic circuits (Kicad, Fusion, LTSpice, Proteus, Deeds)
- Performing measurements and calibrations of measuring instruments and sensors
- Microcontroller programming
- PLC programming (Zelio and CX-Programmer)
- Use of industrial PCB printing tools

Non Technical

- Team leadership and coordination
- Team communication and cooperation

- Time management
- Adaptability

Academic and Independent Projects

- **Automatic Light Using Proximity Motion Sensor with CD4017 IC and LM358 IC (2023):** Final Project for Electronic Design Course.
- **Power Amplifier Simulation with Capacitor-Less Output based on Proteus Software (2024):** Final Project for Analog Electronics Course.
- **Automatic Fan Control System with DHT11 Sensor and Arduino and H-Bridge Motor Driver Application (2024):** Final Project for Sensor Actuator Course.
- **Simulation of Buck Converter Circuit Design using LTSpice Software (2024):** Final Project for Power Electronics Course.
- **Signal Conditioner using LM741 IC (2024):** Final Project for Integrated Electronics Course.
- **Heartbeat Signal Detector Using a Piezoelectric Sensor (2024):** Final Project for the Electronic Instrumentation Course.
- **Smart Home with Ultrasonic Sensor, DHT22 Sensor, and PIR Sensor Controlled by ESP8266 (2024):** Final Project for the Course Microcontroller and IoT Practicum.
- **PCB Manufacturing with BUNGARD Industrial Tools (2024):** Independent Interdisciplinary Project.
- **Toy Car Control with Fuzzy Logic Using Arduino (2025):** Intelligent Control Systems Course Project.
- **SAR (Successive Approximation Register) Type Analog to Digital Converter (2025):** Digital Signal Processing Course Project.
- **Line and Maze Follower Robot (2025):** Robotics Course Project.
- **Fin and Thruster Ship Prototype Controller (2025):** Independent Internship Project.

