MUHAMMAD ARYA DIWA

+6285658043918 | arya97211@gmail.com | www.linkedin.com/in/m-aryadiwa | Padang, Indonesia

An active sixth- semester Electrical Engineering student specializing in Telecommunication Concentration at Andalas University with a strong passion for digital and wireless technologies. Experienced in academic and project- based work related to Computer Network, Digital Signal Processing, Microstrip Antenna Design, Radar and Navigation and Satellite Communication. Known for being adaptable in dynamic environments, capable of working effectively in teams, and skilled in applying technical knowledge to solve real - world engineering problems.

Education Level

Universitas Andalas - **Padang, Indonesia**   Aug 2022 - May 2026 (Expected)
Bachelor of Electrical Engineering, 3.44/4.00

- Telecommunication Concentration
- Active as an assistant for Telecommunication Systems and Networks Laboratory

SMA Negeri 1 Kota Solok - **Solok, Indonesia**   Aug 2019 - Jun 2022
Senior High School, Science, 90.53/100.00

Experiences

Telecommunication Laboratory - **Padang, Indonesia**   Oct 2023 - Dec 2024
Laboratory Assistant

- Responsible as a practicum assistant for Digital Signal Processing 2023 practicum consisting of 60 practitioners
- Responsible as a practicum assistant for Communication Systems 2024 followed by 120 students as practitioners

Telecommunication System and Network Laboratory - **Padang, Indonesia**   Jan 2025 - Present
Assistant Coordinator

- Coordinating 10 assistants in carrying out their duties as laboratory assistants during the period
- Supervised, taught and assessed the practicum of the Communication System 2025 with 120 practitioners for 3 months
- Supervised and assessed the practicum of Computer Network 2025 which was attended by 19 practitioners for 2 months
- Supervised and assessed the practicum of the Telecommunication Transmission System 2025 with 14 practitioners for 1 month

Organization Experience

Telecommunication Laboratory - **Padang, Indonesia**   Dec 2023 - Dec 2024
Research and Development Coordinator

- Chaired the Fiber Optic Network Design Training agenda based on AON and PON on FTTH, FTTB, and FTT architectures using Google Earth which was attended by 40 participants
- Chaired the Microstrip Antenna Design training program as a sugar sensor which was attended by 15 students as participants

Himpunan Mahasiswa Teknik Elektro Fakultas Teknik Universitas Andalas (HMTE FT-UNAND)
Padang, Indonesia   Apr 2024 - Mar 2025
Academic Department Coordinator

- Coordinated and provided solutions to members while regarding the design and implementation of the HMTE FT- UNAND academic department work program.
- Coordinated with other departments related to the implementation of the HMTE FT-UNAND work program.

Himpunan Mahasiswa Teknik Elektro Fakultas Teknik Universitas Andalas (HMTE FT-UNAND)
Padang, Indonesia   Mar 2024 - Present
Member

- Participated as a committee member in the "Pekan Elektro" event
- Participated as a committee member in the "E-Light" event.

Languages & Skills

- **Languages**: Bahasa Indonesia (Native), English (Professional Working Proficiency)
- **Hard Skills**: Ms. Office, Proteus, CST Studio Suite, MATLAB, Cisco Packet Tracer, Arduino IDE.
- **Soft Skills**: Leadership, Communication, Teamwork, Adaptive, Time Management.

Achievements

National Essay Competition InspireX Summit Fest - Bandung, Indonesia
Dec 2024 - Feb 2025

Silver Medal

- Essay's title: Optimalisasi Jaringan Internet Satelit Modern dengan Teknologi *Blockchain Protocol* Guna Mewujudkan Indonesia Digital
- A national competition on technology involving 55 universities, held at Universitas Pendidikan Indonesia (UPI), Bandung.

Mandalika Essay Competition 6 - Lombok, Indonesia
Dec 2024 - Jan 2025

Bronze Medal

- Essay's title: "*Speakglasses:* Mengubah Bacaan Menjadi Suara Sebagai Alat Bantu Tunanetra"
- Focused on assistive medical technology, involving 30+ universities across Indonesia.

Projects

Design Microstrip Antena for Sugar Sensor Application
Sep 2024 - Dec 2024

Antena Microstrip

- Designed and simulated a circular patch microstrip antenna using CST Studio Suite with FR-04 substrate, optimized for S_{11} < −10 dB and VSWR < 2.
- Conducted resonance frequency shift analysis by testing the antenna on various sugar solution concentrations, demonstrating its potential as a liquid sensing device.
- Presented the project in front of the supervising lecturer and an audience of over 10 students as part of final evaluation.

Desgin and Simulation of Synthetic Aperture Radar
Oct 2024 - Dec 2024

Radar and Navigation

- Developed simulation model for SAR signal processing using MATLAB.
- Focused on basic radar imaging techniques and performance analysis.

SMART EGG INCUBATOR: Control and Monitoring System for Closed-House Chicken Egg Incubators
Mar 2025 - Jul 2025

Microprocessors and Microcontrollers

- Built a dual-microcontroller system using STM32F103C8 and Raspberry Pi Pico.
- Integrated sensor modules including MQ-2 (gas), DHT11 (temperature-humidity), and LDR (light sensor)
- Implemented UART communication between microcontrollers for real-time monitoring.
- Output displayed on OLED and controlled actuator systems (servo, buzzer, LED).