Gandang Samudra
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PROFILE

Final-year Telecommunications Engineering student specializing in RF design and antenna systems, with hands-on experience through internships in the defense industry. Strong in team collaboration and technical execution.

Key Highlights:

Anti-Drone Technology: Contributed to the design and implementation of a multi-frequency jammer system, achieving successful neutralization of drone threats during a 1 km field trial.

Network Operations: Operated end-to-end activation processes for Telkomsel Base Transceiver Stations (BTS), efficiently processing over 500 service orders and ensuring optimal allocation of network resources.

Leadership & Mentorship: Enhanced team performance by providing structured mentorship to five junior research assistants, resulting in measurable improvements in productivity and research output.

EXPERIENCE - FULL TIME

PT. Telekomunikasi Indonesia (Telkom Regional III West Java) (July 2024 - August 2024)
Managed Service Operation (MSO) Intern

- Operated activation workflows for Telkomsel's Base Transceiver Stations (BTS), utilizing enterprise platforms such as ENOM (for CNOP orders) and BIMA (for OLO orders).
- Executed core network activation activities, including NTE installation, manual VLAN input for 2G/3G/4G services, and service testing procedures.
- Utilized technical and operational data to support continuous improvement of network functionality, stability, and service optimization throughout West Java.

Achievements:

- Successfully handled over 500 service orders across activation stages—Review Order, Install NTE, and Allocate Resource—within the ENOM system.
- Completed approximately 50 service test orders to assess and validate BTS bandwidth performance and network topology accuracy.
- Processed around 50 OLO (Other Licensed Operator) service orders through the BIMA platform with accuracy and efficiency

PT. Radar Telekomunikasi Indonesia (August 2024 - December 2024)

Research Assistant Intern (MBKM Kedaireka Program)

- Contributed to the research and development of a multi-mode, multi-frequency anti-drone jammer as a key member of the antenna team.
- Executed the complete design, simulation (using CST Studio Suite), and optimization of Log-Periodic Dipole Array (LPDA) and Vivaldi antennas.
- Conducted precise laboratory measurements of antenna parameters (Return Loss, VSWR, Impedance) utilizing a Vector Network Analyzer (VNA).
- Actively participated in field tests of the integrated jammer system to disable live drones.

Achievements:

- Developed and delivered a set of high-efficiency LPDA antennas for a jammer system, capable of operating across multiple frequency bands: 433 MHz, 900–1580 MHz, 2.4 GHz,and 5.8 GHz.
- Antenna measurements at 5.8 GHz indicated high performance, reaching a VSWR of 1.15 and Return Loss of -25.20 dB, surpassing the intended thresholds of VSWR < 1.5 and RL < -10 dB.
- Conducted comprehensive field testing of the jammer system, which successfully interfered with drone communication links at a 1 km range, resulting in the activation of the drone’s fail-safe emergency landing protocol.
- Collaborated in compiling patent and industrial design documents to formalize the intellectual property associated with the jammer antenna system.

EXPERIENCE - ORGANIZATION

Antenna Laboratory (June 2024 - June 2025)
Practicum Division

- Designed and implemented comprehensive technical training modules for practicum participants
- Served as lead instructor during laboratory sessions, facilitating technical discussions and delivering hands-on guidance.
- Established structured workflows to improve lab efficiency.

Achievements:

- Designed training materials to support practicum objectives.
- Facilitated technical discussions that enhanced students critical thinking and problem-solving skills in RF and antenna topics.

Antenna Laboratory (June 2023 - July 2024)
Research Assistant

- Facilitated design ideation sessions to explore innovative antenna configurations.
- Conducted technical analysis on design constraints and identified potential research directions
- Created educational video content to demonstrate lab technologies and activities.
- Provided guidance and mentorship to junior research assistants.

Achievements:

- Improved antenna performance by 30% through advanced design optimization.
- Strengthened lab outreach by producing informative video content published on the laboratory's YouTube channel.
- Successfully mentored and developed the skills of five junior team members.

PROJECTS

Capstone Project: Antenna Tracker for Drone Position Detection and Video Quality Maintenance *(Telkom University, 2025)*

Designed and developed an automated antenna tracking system to improve the range and stability of real-time video transmission from drones for aerial mapping purposes.

- Simulated and optimized a 1×2 helix array antenna using CST Studio Suite for the 5.8 GHz frequency band.
- Built a tracking system based on Arduino Mega 2560, integrated with GPS and LoRa modules for position-based antenna alignment.
- Constructed and tested a working prototype to assess system performance under real-world conditions.
- **Key Achievement:** Achieved reliable drone video transmission at distances up to ±600 meters using 100 mW transmit power, with antenna performance measured at -13.213 dB Return Loss and 1.559 VSWR.

EDUCATION

Bachelor of Telecommunications Engineering, Telkom University (2021-2025)
GPA : 3.19/4.00
TOEFL : 517
Relevant Course: Antenna and Propagation, RF Electronics, Electromagnetics

SKILLS

- **Technical Skills**: RF Design & Simulation (CST Studio Suite) , Antenna Design, Simulation, and Testing , Network Operations & Fulfillment (ENOM, BIMA) , BTS Infrastructure & VLAN Configuration
- **Management Skills**: Team Leadership , Operations Management , Project Management, Mentorship.
- **Software:** CST Studio Suite and HFSS