Muhammad Reza Aditria

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Komplek Bandung Indah Raya C6 No.16, Kota Bandung, Jawa Barat, Indonesia

I am a final-year student in Telecommunication Engineering at Telkom University with a keen interest in Information Technology, particularly in cybersecurity, networking, and web development. I am passionate about expanding my knowledge and staying up-to-date with emerging technologies. My adaptability and quick learning ability allow me to thrive in new environments and tackle challenges with enthusiasm.

EDUCATION LEVEL

Telkom University – Bandung, Jawa Barat **2021 – Present**
Undergraduate Telecommunication Engineering, 3,28/4.00

21 Senior High School – Bandung, Jawa Barat **2018 - 2021**

WORK EXPERIENCES

PT Telkom Indonesia – STO Kalibata, Pasar Minggu, Jakarta **Feb 2024 – Jun 2024**
MSIB Batch-6 Internship – Web Developer

- Developed a responsive Dashboard Auto Insight utilizing Next.js, TypeScript, and Tailwind CSS, ensuring a seamless user experience.
- Implemented front-end integration with back-end APIs to enable real-time data visualization and enhance performance.
- Optimized dashboard efficiency, reducing load time by 30%, through strategic API call handling and component optimization.
- Collaborated with mentors and UI/UX designers to refine the interface, incorporating best practices to enhance user interaction and accessibility.
- Conducted thorough testing and debugging to ensure high performance, responsiveness, and cross-browser compatibility.

ORGANIZATIONAL EXPERIENCE

Telkom University Education Movement – Telkom University **Dec 2021 – Dec 2023**
Event and Creative Team; Head Division

- As a head division of Event and Creative Team (ECT) involves on strategic planning on work programs for one period, managing and assigning staff division for each work programs, and successfully implemented work programs: Skill Up TEAM,TEAM Anniversary, Open Mind, TEAM FEST, Regenerasi TEAM.

Computer Basic Laboratory – Telkom University **Sep 2022 – Sep 2023**
Rules Discipline committee

- Conducting 90-minute instructional sessions centered on the foundational aspects and real-world application of the C-Programming Language

Multimedia Application, Big Data, and Cybersecurity Laboratory - Telkom University
Sep 2023 - Present
Cybersecurity Research division

- Conducted hands-on research on real-world cybersecurity threats and defenses, including network intrusion detection using Suricata, Linux hardening techniques, and secure communication protocols. Actively contributed to lab projects by simulating attack scenarios, writing rule-based detection systems, and documenting findings to support further academic research and practical implementation.

PROJECTS & RESEARCH

Suricata-based IPS Implementation on Raspberry Pi

This project aimed to secure IoT networks by implementing an Intrusion Prevention System (IPS) using Suricata on a Raspberry Pi. The goal was to enhance the security of IoT devices, making them harder to attack in a small office or home environment.

- Designed and configured Suricata IDS/IPS on Ubuntu Server for network traffic monitoring.
- Built a lightweight IPS gateway using Raspberry Pi for small office/home environment.
- Tested intrusion rules and fine-tuned alert handling with custom rulesets.
- Integrating IoT system with Raspberry Pi

Caesar Cipher Encryption Visualization Website

- Developed an interactive web application to demonstrate Caesar Cipher encryption and decryption techniques using Next.js, TypeScript, and Tailwind CSS.
- Users can input plain text and visually observe the transformation process into cipher text and vice versa, enhancing educational understanding of classical cryptography.
- The project includes dynamic state updates, input validation, and customizable shift values to simulate real-world cipher behavior.
- Deployed on Vercel for public access and learning purposes.

IoT Smart Garden System with Real-Time Environmental Monitoring

Created a smart garden solution using ESP32 and three sensors:

- SHT31 for Air Temperature and Humidity
- Soil Temperature Sensor
- Soil Moisture Sensor

Data is transmitted to Firebase Realtime Database and visualized on a custom dashboard displaying:

- Real-time Air Temperature
- Real-time Humidity
- Real-time Soil Temperature
- Real-time Soil Moisture

Developed using Arduino IDE, Firebase, and Raspberry Pi as IoT gateway.Designed for remote plant condition monitoring, enabling proactive decisions for irrigation and plant health.

HARD SKILLS

- **Programming Language:** C (Proficient), Python (Intermediate), Java (Beginner).
- **Web Development:** Next.js, JavaScript, TypeScript, React, TailwindCSS.
- **Cybersecurity:** Linux, Penetration Testing, Suricata (IDS&IPS), Encryption, Docker, AWS, GCP.
- **IoT & Embedded Systems:** Microcontroller, Firebase, Raspberry Pi.
- **Software & Tools:** Fusion360 (3D Design), Git/GitHub, Linux (Ubuntu Server, Kali Linux).

SOFT SKILLS

- **Analytical Thinking**
- **Problem Solving**
- **Attention to Detail**
- **Team Collaboration**
- **Communication Skills**
- **Adaptability**
- **Time Management**
- **Critical Thinking**
- **Fast Learner**
- **Initiative & Proactiveness**