

# ABDUL FATAH AMRULLOH

## Telecommunications Engineering Student

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## SUMMARY

I am a Telecommunications Engineering graduate from Telkom University with a strong interest in the Internet of Things (IoT), Adaptive Networks, and intelligent network simulations. I have hands-on experience in developing a vehicle ad-hoc network (VANET) project and utilizing various simulation platforms and web development technologies. I excel in collaborative and creative problem-solving environments.

## EXPERIENCE

### Intern

#### PT Sisterponik

📅 02/2024 - 06/2024 📍 Indonesia

A technology company focused on IoT applications

- Designed schematics and boards with Eagle and Fritzing software, and casing design with Tinkercad
- Integrated hardware and software and conducted field testing for data validation
- Supported the manufacturing process and data collection experiments in agricultural soil

### Teaching Assistant

#### Programming Laboratory and Network Security Laboratory

📅 09/2023 - 02/2023 📍 Telkom University

Educational laboratory focused on programming and network security

- Prepared materials before laboratory sessions
- Assisted students in simulating MATLAB
- Evaluated simulation results of students

### Teaching Assistant

#### Programming Laboratory and Network Security Laboratory

📅 09/2023 - 02/2023 📍 Telkom University

Educational laboratory focused on programming and network security

- Prepared materials before laboratory sessions
- Assisted students in simulating Cadsoft Eagle Design PCB, Autodesk Viewer, AutoCAD, and SolidWorks
- Evaluated simulation results of students

### Teaching Assistant

#### Programming Laboratory and Network Security Laboratory

📅 09/2023 - 02/2023 📍 Telkom University

Educational laboratory focused on programming and network security

- Prepared materials before laboratory sessions
- Assisted students in simulating Python using Visual Studio Code and Google Colab
- Evaluated simulation results of students

## EDUCATION

### Bachelor's Degree in Telecommunication Engineering

#### Telkom University

📅 08/2021 - 06/2025 📍 Indonesia

## STRENGTHS



### Technical Skills

Solid background in computer networks and IoT development



### Interpersonal Skills

Effective communication and team collaboration

## KEY ACHIEVEMENTS



### Smart Fish Farm Android Application

Developed a smart fish farm Android application which facilitates investment in fisheries

## CERTIFICATION

### CCNA v7: Introduction to Networks

Cisco Certified Network Associate (CCNA) v7: Introduction to Networks

### CCNA v7: Switching, Routing, and Wireless Essentials

CCNAv7: Switching, Routing, and Wireless Essentials

### Microsoft Excel Basic Training by Skill Academy

Understanding basic Excel formulas, Knowing Excel formulas, Creating and editing charts and diagrams.

### Microsoft Azure AI Fundamentals

Introduction to AI, machine learning, anomaly detection, computer vision, natural language processing, knowledge mining, AI challenges and risks, responsible AI.

### HCIA-AI V3.5 Course

Gained an understanding of artificial intelligence (AI) fundamentals and its real-world applications, Studied neural networks, machine learning models, and AI system architectures.

### Scaling AI in Your Organization

Explored strategies for responsibly scaling AI adoption in organizational environments, Understood the impact of AI on productivity, decision-making, and efficiency.

### Prompt Engineering with Azure OpenAI Service

Learned the basics of prompt engineering for large language models (LLMs), Applied prompt engineering in practical scenarios using Azure OpenAI Service.

# LANGUAGES

Indonesian

Native

English

Proficient

# PROJECTS

## Smart Fish Farm Android Application

📅 01/2021 - 12/2021    📍 Indonesia

Developed an Android application to support fish farming investments

- Created a user interface for the SMAFI application
- Focused on investment opportunities in fisheries
- Managed the application using Android Studio and Flutter with Dart programming

## IoT-Based Soil NPK Monitoring System

📅 02/2024 - 06/2024    📍 Indonesia

Designed and implemented an IoT-based system to measure soil nutrients (Nitrogen, Phosphorus, Potassium) using Arduino, Modbus, SIM800L, and Blynk platform.

- Developed hardware and firmware to collect and transmit real-time NPK data from the field
- Designed schematic and PCB for sensor integration, including 3D casing prototyping using Tinkercad
- Enabled mobile-based monitoring and data visualization through Blynk app for farmers
- Conducted real-environment testing on paddy and papaya soil samples, comparing fertilizer effects on NPK values
- Provided actionable insights for precision agriculture and sustainable farming practices

## Website Vanets

📅 02/2025 - 06/2025    📍 Indonesia

Developed a web-based dashboard to monitor VANET routing performance using real-time metrics.

- Simulated VANET (Vehicular Ad-hoc Network) routing on Jl. Jenderal Sudirman, Purwokerto using AODV protocol
- Collected and visualized metrics such as Throughput, End-to-End Delay (EED), and Packet Delivery Ratio (PDR)
- Integrated historical comparison features for data analysis and network performance evaluation
- Built using modern web technologies (e.g., Node.js, Chart.js) to deliver an interactive and responsive UI for network analysis

## Ad-Hoc On Demand Distance Vector Simulation

📅 02/2025 - 06/2025    📍 Indonesia

Simulated a network using AODV protocol for vehicle communication

- Developed a simulation system for ad-hoc vehicle networks using the AODV protocol
- Used SUMO and OMNeT++ applications for vehicle mobility simulation and communication scenarios
- Analyzed parameters such as end-to-end delay, throughput, and packet delivery ratio
- Created a website to display simulation results and visualize parameters interactively and in real-time