

MUHAMMAD IFWAD BIN AHMAD

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Portfolio/Home Lab: naspifwad.taile8dcb4.ts.net/

SUMMARY

Final year Telecommunication Engineering student and Systems Engineering Intern at Telekom Malaysia R&D. Experienced in Linux based troubleshooting, Kubernetes deployment validation, application testing, authentication flow checks, database connectivity, and technical documentation. Built a self hosted DevOps Home lab using Docker, K3s, Traefik, Tailscale, and Grafana to strengthen practical infrastructure and networking skills.

TECHNICAL SKILLS

Operating Systems: Linux Ubuntu, Windows

DevOps & Containers: Docker, Kubernetes/K3s, Traefik, Git, GitHub

Cloud & Infrastructure: TM Alpha Edge, ECS, VPC, EIP, CCE, cloud/edge deployment support

Monitoring & Troubleshooting: Grafana, log review, service health checks, connectivity testing

Security & IAM: Keycloak, RBAC, MFA validation, access control, Security+ fundamentals

Networking: TCP/IP, DNS, VLAN, basic network troubleshooting

Scripting: Bash basics, Python basics

WORK EXPERIENCE

Telekom Malaysia Research & Development, Malaysia

FORCE 2.0 - Intelligent Workforce Management Project

Mar 2026 - Aug 2026

- Assisted Kubernetes deployment for multiple microservices, helping improve deployment readiness, environment stability, and system validation efficiency by approximately 30% across the development and testing environment.
- Configured and validated Kubernetes workloads, services, ingress, config maps, secrets, and namespaces, improving deployment consistency and reducing environment configuration issues by an estimated 30–40% across the testing environment.
- Assisted in setting up and validating TM Alpha Edge infrastructure components including ECS, VPC, EIP, and CCE, improving cloud/edge hosting readiness and reducing infrastructure setup gaps by an estimated 30–35% before application deployment.
- Performed post-deployment monitoring and validation by checking pod status, application logs, service behavior, backend responses, database connectivity, and user access, improving issue visibility and reducing troubleshooting time by an estimated 30–40%.
- Assisted Keycloak configuration and validation for centralized authentication, user federation, MFA flow, RBAC, and session control, improving authentication consistency and reducing access-control configuration gaps by an estimated 30%.

FORCE - Intelligent Workforce Management Project

Feb 2023 - Jun 2023

- Assisted engineering teams with system testing, technical validation, and project documentation.
- Supported application and infrastructure-related testing activities in a technical environment.
- Gained early exposure to software systems, networking, troubleshooting, and engineering documentation.

PROJECTS

Passive Wi-Fi Radar for Human Movement Detection using GNU Radio & HackRF

Final Year Project

- Developed a passive radar system using GNU Radio and HackRF for Wi-Fi signal analysis and human movement detection.
- Worked with IQ signal capture, FFT processing, Doppler shift analysis, and signal visualization techniques.
- Conducted research on SDR-based sensing technologies and wireless signal processing.

ESP32 Smart Home Monitoring System

ESP32 | Sensors | Blynk | MySQL | Grafana | IoT Monitoring

- Developed an ESP32-based smart home monitoring system integrating DHT22, ultrasonic, soil moisture, and ACS712 sensors.
- Integrated Blynk for remote monitoring and alert notifications.
- Designed Grafana dashboards with MySQL database integration for telemetry visualization and monitoring.

DevOps & HomeLab Environment

Linux | Docker | K3s | Traefik | Tailscale | Grafana

- Built and maintained a personal Linux based home lab to practice DevOps, networking, and system administration.
- Deployed a portfolio website in a self hosted environment using Docker and lightweight Kubernetes concepts.
- Configured Traefik for service routing and explored secure external access using Tailscale.
- Practiced service deployment, monitoring, log analysis, network troubleshooting, and backend system management.
- Used the environment to strengthen practical understanding of containerization, ingress routing, secure networking, and infrastructure operations.

EDUCATION

Bachelor of Engineering Technology (Hons) in Telecommunications

Universiti Kuala Lumpur (UniKL BMI) | Oct 2023 – Aug 2026

CGPA: 3.54

Relevant Projects:

- Passive Wi-Fi Radar for Human Movement Detection using GNU Radio & SDR (HackRF)
- Satellite Orbit Simulator
- Smart Streetlight System using ESP32
- Real-Time Obstruction Detection using Raspberry Pi and MATLAB

Diploma in Electrical Engineering (Telecommunication)

Universiti Kuala Lumpur (UniKL BMI) | Jul 2020 – Jan 2023

CGPA: 3.42

Final Project:

- IoT-Based Security System using RFID Module

CERTIFICATION AND LICENSES

CompTIA Security+ (SY0-701)

- Issued: September 2025

Cisco Networking Academy Course Completion

- Completed: August 2024

CIDB Malaysia Registered Construction Personnel

- Registered: August 2025

ADDITIONAL INFORMATION

Languages: Malay — Native | English — Professional Proficiency

Leadership: President, BMI Picture Club, UniKL BMI

Engagement: Alumni Secretariat, UniKL BMI — Event & Multimedia Management

Activities: Industrial Safety and Health Training

REFERENCES

Saiful Yusri Mohd Yassin

Lecturer, Communication Technology
UniKL British Malaysian Institute
Relationship: Final Year Project Supervisor

Mohd Adli Azaddin Samat

Researcher, System Engineer
TM Research & Development
Relationship: Internship Supervisor