

Miftahul Rizki

CTO @ NALAR GROUP • HEAD OF KASTRAT, BEM FT USK • COMPUTER ENGINEERING STUDENT

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Computer Engineering student at **Universitas Syiah Kuala**, **CTO of NALAR Group** (NFC hardware startup, solo tech lead in 5-person founding team, launching stage) and organizer at **BEM FT USK (Kabinet Revolusi 2026)**. Builder of **Peuhaba Smartboard — assistive VAKT tool for students with special needs learning to read & write** and IoT/LLM projects (FlexiTrack, AgroLLM). Seeking to lead a **Claude Builder Club** — hosting hands-on workshops, hackathons, and peer learning for responsible, helpful AI.

EDUCATION

Universitas Syiah Kuala (USK) — Faculty of Engineering 2023 – 2027 (Expected)
Bachelor of Engineering (S1), Computer Engineering (Teknik Komputer) — NIM 2304111010071
• **Thesis:** *Comparative Bandwidth Utilization of Mass File Distribution Using IPFS vs HTTP in Emulated Networks* — Mininet 2.3.0 + Kubo 0.28.0 + Wireshark 4.2.0; metrics: throughput, latency, bandwidth utilization, packet duplication (10 MB / 100 MB / 1 GB).

EXPERIENCE

NALAR Group — Chief Technology Officer (CTO) Aug 19, 2026 – Present
NFC Hardware Startup — Solo Technical Lead · 5-person founding team (CEO/COO/CPO/CMO/CTO)
Launching stage · Next.js + SQLite + Tailwind · NTAG213 write-once
• Solo tech lead owning architecture & shipping for internal production & sales toolkit — single deploy, shared basic-auth; customer zero-touch on software.
• Design NTAG213 write-once QC workflow (locked after QC) and portfolio demo builds; YAGNI-driven decisions mapped to repeat orders, healthy margin, and repeatable ops.

BEM FT USK — Head of Strategic Studies & Action Dept (KASTRAT) Apr 2026 – Present
Badan Eksekutif Mahasiswa — Faculty of Engineering
• Lead KASTRAT research: 6-chapter study on Aceh (10-year PDRB gap, fiscal trap Otsus, logistics leakage, educated unemployment 8.68%, EBT/KI failures) backed by 75 evidence files (BPS, Bappeda Aceh, DJPb); own the 4-Pillar solution synthesis.

Peer Mentoring & Workshop Facilitation — Presenter 2025 – Present
• Delivered Peuhaba mentoring decks — bridging technical and non-technical audiences; advocate for **helpful, honest, harmless AI**.

TECHNICAL PROJECTS

FlexiTrack — IoT Physiotherapy Monitoring System 2025 – 2026
ESP32 + HX711 + Firebase RTDB + React Native (Expo 56) — End-to-end IoT & Mobile
github.com/miftahulrizki-usk · Firebase RTDB asia-southeast1 · 44-page project report
• Built ESP32 firmware with HX711 calibration and Wi-Fi provisioning via captive portal (FlexiTrack AP); Firebase RTDB (asia-southeast1) as telemetry backbone with role-based sync for **Pasien / Dokter / Keluarga**.
• Developed React Native app (Expo 56, react-native-svg) with animated dashboard, prescription management, and real-time force charts; plus companion web dashboard (vanilla JS + Firebase) — 44-page report.

KOSGO — Kos Management SaaS 2025
Next.js 16 · Prisma · Supabase (PostgreSQL) · Tailwind — Solo Builder, Full-Stack
project/kosgo · Solo builder
• Solo-built SaaS for kos owners: Landlord → Property → Room (Tersedia/Terisi) → Tenant → Invoice (Lunas/Belum Bayar) → Expense; dashboards for occupancy & revenue (realized/outstanding/net profit, IDR).

AgroLLM — LLM Assistant for Agriculture 2025
Python · LLM · RAG — Campus Project
github.com/miftahulrizki-usk/AgroLLM
• Prototype LLM app for agricultural Q&A — explored prompt design and retrieval (RAG) patterns; iterated with Claude on data handling and evaluation.

Peuhaba Smartboard — Assistive VAKT Tool for Students with Special Needs 2025
C++ Embedded · Assistive Tech — Reading & Writing via VAKT Multisensory Method
github.com/miftahulrizki-usk/Peuhaba-Smartboard
• Designed for students with special needs learning to read & write using VAKT (Visual, Auditory, Kinesthetic, Tactile) — visual cues, auditory prompts, kinesthetic/tactile tracing; C++ firmware with dyslexia-friendly interaction patterns.

Bloomit — Volunteer Matching Platform (RPL Coursework) 2025
Mendix Low-Code · Community Service — Event Creation & Registration
github.com/miftahulrizki-usk/bloomit · Not published (coursework)
• Web app matching people who want to do community service but have no peers — create events & join as participant; built as RPL assignment on Mendix Atlas template.

PDF Summarizer Bots — AI Tooling 2024 – 2025
Python · TypeScript · Telegram Bot — LLM Pipelines
github.com/Kiki2356 — botpdf, kesimpulanpdfbot, safelink
• Built Telegram bots ingesting PDFs for LLM summarization pipelines.

SKILLS

AI & CLAUDE FLUENCY	Claude for code / research / writing · Prompt engineering · LLM integration & RAG · Agentic workflows
NETWORKS & DIST. SYSTEMS	Mininet 2.3.0 · Wireshark 4.2.0 · IPFS / Kubo 0.28 · Kademlia DHT · Merkle DAG · Bitswap · TCP/IP · Congestion Control
IOT & EMBEDDED	ESP32 · HX711 · PlatformIO · Arduino · Firebase RTDB · Wi-Fi provisioning
WEB & MOBILE	Next.js 16 · React Native · Expo 56 · JavaScript / TypeScript · Python · Prisma · Supabase · SCSS · Firebase
COMMUNITY & COMMS	Workshop facilitation · Mentoring (Peuhaba) · Event organization · Technical writing · BEM governance · Startup CTO (lean shipping, YAGNI)