Muchamad Coirul Anwar

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SUMMARY

Software Engineer with 2+ years of experience specializing in backend optimization and low-level system architecture. Proven track record of improving application throughput by **3x** and reducing error rates by **40%**. Proficient in **Go, Rust, and Kubernetes**, with a deep focus on building scalable microservices and custom operating system kernels.

EXPERIENCE

Full Stack Developer | Bank Rakyat Indonesia (BRI)   Nov 2025 - Present

- Configured **webMethods** ESB for conditional request routing and protocol mediation, optimizing the data flow between the API Gateway and backend microservices.
- Developed the BRIAPI Outgoing Payment microservice, migrating to GORM and implementing fault tolerance to ensure zero downtime during Redis outages.

Full Stack Developer | Mitraplus Infotek TotalSolusi   Dec 2023 – Nov 2025

- **Migrated** the backend runtime from Node.js to **Bun**, increasing application throughput by **3x** and reducing CPU usage by **50%**.
- **Architected** a standardized GitHub Actions CI/CD pipeline for 10+ applications, tripling deployment frequency with a **97% success rate** across 5 environments.
- **Deployed** a comprehensive observability stack (**Prometheus, Grafana, Loki**), reducing the Mean Time to Detect (MTTD) for production errors by **50%**.

EDUCATION

Open University of Indonesia | B.S. in Information Systems   Sep 2024 – Jun 2028

SMKN 26 Jakarta | Electrical Engineering   Jul 2016 – Jun 2020

ACHIEVEMENT

Gold Medal National Vocational Skills Competition (Industrial Control)   May 2018

- Designed and implemented automated industrial workflows using PLC programming and ladder diagrams.

VOLUNTEER

Program Development | Asa Insan Muda Foundation   Feb – May 2021

- Planned and executed community outreach programs, coordinated 5+ volunteers and managed logistics for 200+ aid packages during COVID-19 relief efforts.

PROJECTS

Void OS | Rust Unikernel

https://github.com/mcnwr/void-os-docs

- **Architecting** a bare-metal Unikernel Operating System from scratch using **Rust** and **x86 Assembly**.
- **Implemented** a custom bootloader, paging memory management, and context switching without standard libraries (no_std), demonstrating deep proficiency in low-level system architecture and safe concurrency.

PlutoDB | Lightweight NoSql Database

https://github.com/mcnwr/plutodb-docs

- **Developed** a lightweight, persistent key-value store from the ground up to master database internals.
- Implemented core database principles including an append-only log for durability, an in-memory **B-Tree index** for high-performance reads, and a log compaction mechanism to efficiently manage storage.

SKILLS

- **Programming Languages:** Rust (Axum, no_std), Go (Gin, Fiber), x86 Assembly, TypeScript, Node.js (Bun), SQL.
- **Backend & Systems:** Microservices Architecture, gRPC, Event-Driven Architecture, RESTful APIs, Software AG webMethods ESB, RabbitMQ, Distributed Systems.
- **Infrastructure & Cloud:** Kubernetes (GKE, HPA), Docker, Amazon Web Services (AWS EC2, Lambda, S3), CI/CD (GitHub Actions), GitOps, Prometheus, Grafana.
- **Databases & Performance:** PostgreSQL, Redis, MongoDB, Load Testing (k6), Postman.
- **Languages:** English (Professional Working Proficiency), Indonesian (Native).