

Krisna Firdaus

Senior Full Stack & AI Product Engineer

CTO at NEMU · Open to remote contract and part-time work · 20–40 hrs/week

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SUMMARY

Senior full stack engineer with 6+ years shipping production web and mobile products (9+ years in engineering, starting with industrial IoT at Toyota). As CTO at NEMU, architected a social commerce platform end to end, from a 100+ module NestJS backend and nine web and Flutter apps to live shopping, in-app games, and AI features. Measurable frontend impact across e-commerce, fintech, healthcare, and government procurement: ~50% better Core Web Vitals, 40% faster delivery through design systems, and 70% test coverage. Has worked remotely with a Singapore-based team, led small developer teams, and shipped contract work alongside full-time roles.

TECHNICAL SKILLS

Frontend: TypeScript, JavaScript, React, Next.js, Vite, Tailwind CSS, React Query, Storybook

Backend: Node.js, NestJS, Express, .NET (C#), REST, GraphQL, OpenAPI, BullMQ

Data & Cloud: PostgreSQL, TypeORM, Redis, Elasticsearch, AWS (S3, SES), Docker, GitLab CI/CD

Realtime & Media: WebSockets, Redis pub/sub, WebRTC (WHIP), OvenMediaEngine, LL-HLS, FFmpeg, three.js

AI & LLM: Google Gemini (vision, search grounding), OpenAI, fal.ai (video, avatars), ONNX, OpenCLAW, Claude

Mobile & Testing: Flutter (iOS, Android), Vitest, Playwright, Jest, Cypress, pnpm/Turborepo monorepos

Also used: Vue.js, Nuxt.js, React Native, Golang, Python, MySQL, MongoDB, Firebase, Google Cloud

Languages: Indonesian (native), English (professional working proficiency)

PROFESSIONAL EXPERIENCE

Chief Technology Officer | NEMU

Apr 2026 – Present

Indonesian social commerce app spanning marketplace, food ordering, live shopping, and games. Hands-on technical lead; authored ~70% of 8,000+ commits since June 2026.

- Grew a NestJS monolith from 7 merged legacy services to 100+ modules (PostgreSQL, Redis/BullMQ, Elasticsearch) with a 100% coverage gate and health-checked AWS deploys.
- Built 8 React 19 web apps in a Turborepo monorepo and a Flutter app shipped through iOS TestFlight, all on one design system and an OpenAPI-generated client.
- Built live shopping on OvenMediaEngine (WebRTC/RTMP ingest, LL-HLS playback), an AI avatar host that answers viewer comments, and an AI-moderated short-video feed ahead of public launch.
- Designed the gamification layer (XP, levels, daily missions, reconciled coin ledger) and three in-app games, including a three.js 3D racing game, with server-side simulation and staged rollout.
- Shipped Gemini and OpenAI features: chat-first discovery, photo-to-listing autofill, AI product videos, and a vehicle price estimator that turns visitors into sellers via a pre-signup preview.
- Built realtime chat (WebSockets, Redis pub/sub), QR dine-in ordering with POS for restaurants, Midtrans and DOKU payments with idempotent checkout, and on-prem KYC face matching.

Senior Software Engineer | Bukumed

Apr 2025 – Apr 2026

- Built AI assistants: an OpenCLAW virtual assistant that automated routine workflows for enterprise clients, and a real-time voice assistant (Web Speech API, GPT-4o mini).
- Architected a shared design system and frontend dashboard adopted across multiple concurrent client projects.
- Led monorepo adoption and built testing infrastructure that reached 70% code coverage, reducing production bugs and raising release confidence.
- Built an AI-assisted delivery workflow connecting Claude with Linear/Jira, Figma, and the codebase for ticket-to-code traceability and faster design handoff.

Senior Full Stack Web & Mobile Developer | Kick Avenue

Jan 2024 – Apr 2025

Indonesian marketplace for sneakers, streetwear, and luxury goods.

- Led the marketplace redesign (Next.js, React, Blazor) and the Flutter iOS/Android apps.
- Built a Storybook design system shared across web and mobile, increasing development velocity by 40%.
- Improved Core Web Vitals and page load speed by ~50% through caching, code splitting, and lazy loading.

Software Engineer | GovTech Procurement

Remote · Jun 2023 – Jan 2024

- Developed the national e-procurement marketplace for LKPP (Indonesia's National Public Procurement Agency) with Next.js, React, and GraphQL.
- Delivered a stack migration and UI/UX overhaul that improved system performance and user engagement.
- Worked with public-sector stakeholders to meet accessibility standards and compliance requirements.

Software Engineer | Tribe Fintech

Remote (Singapore) · Mar 2023 – May 2023

- Built React web apps for banking clients, optimized for low-bandwidth and 3G users in emerging markets.
- Led the frontend migration from Material UI to Tailwind CSS and improved application performance by 30% through load-time optimization, caching, and resource management.
- Managed and mentored two outsourced developers to deliver on schedule.

Software Engineer II, Web | Moladin

Jul 2021 – Feb 2023

Indonesian automotive marketplace and vehicle financing platform.

- Led the overhaul of the automotive marketplace and CRM dashboard with React and .NET.
- Built .NET backend APIs and migrated the React frontend to a Storybook component library.
- Managed and mentored two frontend developers, and led the team's technical SEO work to 80% SEO coverage, growing organic traffic.

Full Stack Engineer | Talentics

Feb 2021 – Jun 2021

- Built real-time chat with WebSockets and integrated payments supporting multiple payment methods.
- Developed REST APIs, optimized database queries, and set up automated testing.

Software Engineer (IoT) | Toyota Motor Manufacturing Indonesia

Jan 2020 – Jan 2021

- Built IoT inventory tracking, production dashboards, and sensor-integrated QA testing modules.

Maintenance Engineer | Toyota Motor Manufacturing Indonesia

Sep 2017 – Jan 2020

- Programmed PLCs and built machine connectivity and IoT monitoring for predictive maintenance.

REMOTE CONTRACT & FREELANCE

Frontend Developer (Freelance) | Unity.sg

Remote · Jun 2022 – Nov 2022

- Built a crypto trading web app with encryption, identity and auth services, and secure admin tools.

Frontend Consultant (Project-based) | GovTech Edu

Remote · Nov 2021 – Feb 2022

- Built Kampus Mengajar, part of the Ministry of Education's Kampus Merdeka program, with React and GraphQL.

TEACHING & MENTORING

Instructor & Technical Mentor | Dibimbing, Rakamin, Bangkit & others

Part-time · 2021 – Present

- Current mentor at Dibimbing: mock hiring-manager interviews, coaching, and portfolio and project reviews.
- Mentor, judge and final project evaluator at Coding.id and RevoU; Subject Matter Expert and judge at Rakamin.
- Taught software engineering and full stack development at Bangkit Academy (led by Google, Tokopedia, Gojek & Traveloka; cohorts of 30-50), Binar Academy and Skilvul.
- Mentored BahanBaku, a team in Bangkit Academy's incubation program, through its Play Store launch.
- Named Best Frontend Instructor at Ruangguru (2022); technical evaluator at GoTo Impact Foundation.

EDUCATION & CERTIFICATIONS

Bachelor of Computer Science, BINUS University	2026
Associate Degree, Mechatronics, Robotics & Automation, Toyota Indonesia Academy (full scholarship)	2017
Google Cloud Platform Fundamentals: Core Infrastructure, Coursera	Nov 2020
Google Cloud Platform Fundamentals for AWS Professionals, Coursera	Nov 2020
Managing Machine Learning Projects with Google Cloud, Coursera	Nov 2020
Getting Started with AWS Machine Learning, Coursera	Nov 2020
Artificial Intelligence Training, Digital Talent Scholarship	Nov 2019
Training: Backend Engineer in Golang (Alterra Academy, grade A, 2023), Flutter Developer (Course-Net, 2023), Full Stack Web (Impact Byte, 2020)	