



MUHAMAD JUWANDI

Full-Stack Web Developer & Data Science Candidate

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Proactive Full-Stack Web Developer and Data Science undergraduate specializing in B2B2C SaaS platforms and end-to-end data systems. Proven track record of architecting scalable applications like ACC Studio, serving over 200 corporate users. Strong technical foundation in Next.js, TypeScript, Supabase, and Python-based machine learning pipelines (PyTorch, Causal Inference). Combines technical development with strategic SEO optimization to drive organic business growth. Actively studying Japanese (targeting JLPT N4 by July 2026) to secure remote development and analytics roles within the Japanese and international markets.

TECHNICAL SKILLS

- **Frontend Engineering:** Next.js (v16), React (v19), TypeScript, Tailwind CSS v4, Framer Motion, Flutter, HTML/CSS, JavaScript.
- **Backend & Cloud:** Node.js, Supabase (PostgreSQL, Row Level Security, Realtime), SQLite, REST API Design.
- **Data Science & AI:** Python, R, SQL, Pandas, NumPy, Scikit-Learn, PyTorch (LSTM), Matplotlib, Plotly, Facebook Prophet.
- **Advanced ML & Strategy:** DoWhy (Causal Inference), Nashpy (Game Theory), SDV (Synthetic Data), Streamlit.
- **Development Tools:** Git/GitHub, VPS Deployment, WordPress, Technical SEO, UI/UX Design.
- **Languages:** English (Professional Working Proficiency - Technical Reading & Documentation), Japanese (Conversational, JLPT N4 Candidate - July 2026).

WORK EXPERIENCE

Freelance Full-Stack Developer | ACC Studio (app.accstudio.pro)

Remote, Indonesia | 2026 – Present

- Architected and deployed a multi-tenant B2B2C SaaS evaluation platform for corporate travel clients, scaling the system to support 200+ registered active users.
- Engineered the frontend utilizing Next.js (v16), React (v19), TypeScript, and Tailwind CSS v4 to deliver a distraction-free, Server-Side Rendered (SSR) interface optimized for accessibility.
- Developed a secure backend using Node.js and Supabase (PostgreSQL), implementing strict Row-Level Security (RLS) to ensure 100% data isolation across distinct corporate tenants.
- Integrated Supabase Realtime (WebSockets) to facilitate live participant leaderboards and a real-time administrative helpdesk system.
- Designed a multi-layered Role-Based Access Control (RBAC) system for Master Admins, Corporate Clients, and End-Users (Jamaah).
- Built an automated reporting pipeline that calculates examination scores and generates branded, downloadable PDF certificates on demand.

Technical Co-Developer & SEO Lead | imbalankerja.id

Remote, Indonesia | 2025 – Present

- Spearheaded the technical architecture, deployment, and ongoing maintenance of an actuarial employee-benefits publication platform.
- Programmed a custom Employee Benefits (Dana Pensiun) Calculator that mirrors complex actuarial Excel business logic.
- Integrated a Google Sheets API data pipeline to seamlessly capture and manage 29+ high-quality lead submissions for B2B outreach.
- Executed a targeted technical SEO strategy, successfully ranking the platform on Google's first page (position #6) for the highly competitive primary keyword.

Web Developer & Content Strategist | Naeta Digital Consultant

Remote, Indonesia | Jan 2025 – Present

- Develop and optimize client websites alongside visual branding assets, contributing to frontend builds and overall structure.
- Produce UI/UX configurations and SEO-driven articles to increase organic engagement and online performance.

KEY PROJECTS (PORTFOLIO)

1. Equilibrium-X: Autonomous Strategic Pricing Agent (Data Science)

Link: <https://github.com/MuhamadJuwandi/data-science-portfolio/tree/main/Equilibrium-X>

- **Tech Stack:** Python, DoWhy, Nashpy, Streamlit, SDV.
- **Contributions:** Engineered a causal inference engine using DoWhy to estimate true price elasticity by isolating confounding seasonality variables. Applied Nash equilibrium (Nashpy) to simulate competitive pricing dynamics, avoiding tacit collusion risks and optimizing profit stability.

2. TEPCO Tokyo Electricity Demand Forecasting (Machine Learning)

Link: [<https://github.com/MuhamadJuwandi/data-science-portfolio/tree/main/TEPCO-Demand-Forecasting>]

- **Tech Stack:** Python, PyTorch (LSTM), Pandas, Facebook Prophet.
- **Contributions:** Built a robust ETL data pipeline merging historical Kanto region electricity usage with real-time weather data. Achieved a superior 3-5% Mean Absolute Percentage Error (MAPE) by implementing a deep learning LSTM architecture, outperforming baseline Prophet models.

3. Olist Sales & Customer Analytics Dashboard (End-to-End E-Commerce Analysis)

Link: [<https://github.com/MuhamadJuwandi/data-science-portfolio/tree/main/olist-dashboard-project>]

- **Tech Stack:** Python, Streamlit, Pandas, Scikit-Learn (K-Means), Facebook Prophet.
- **Contributions:** Performed complex ETL processes on 9 relational tables to integrate 100k+ real-world e-commerce transactions. Implemented RFM Analysis and K-Means Clustering to classify customers into actionable segments for retention strategies. Developed time-series forecasting models using Facebook Prophet to predict category-specific sales trends, presented through an interactive Streamlit dashboard.

4. PSAK 219 Actuarial Web Application (Full-Stack HRIS System)

Link: [<app.imbalankerja.id>]

- **Tech Stack:** Next.js (App Router), TypeScript, Prisma ORM, MySQL/SQLite, NextAuth.js, Tailwind CSS, Decimal.js
- **Description:** Engineered a secure, multi-tenant financial web application to calculate complex post-employment benefits (PVDBO, Service Cost, Interest Cost). Implemented Server-Side Rendering (SSR) and NextAuth.js middleware to guarantee strict data security and prevent unauthorized access to sensitive corporate HR data. Utilized Decimal.js for high-precision financial calculations, eliminating floating-point rounding errors to meet rigorous accounting standards.

AWARDS & INITIATIVES

- **Google Student Ambassador Candidate (2026):** Selected for the Gemini Challenge, showcasing strong self-aspiration and technical AI application skills
- **#JuaraVibeCoding by Google (May 2026):** Active participant in developing solutions using Google Cloud Console and Google AI Studio.

EDUCATION

Universitas Terbuka | **Bogor, Indonesia**

Bachelor of Data Science (Sains Data) | Jul 2024 – Present (Expected: Jul 2028)

- **Current Semester:** 5.
- **Focus:** Advanced Statistics, Causal Inference, Strategic Modelling, and Data Analysis.

CERTIFICATIONS & TRAINING

- **Dicoding Indonesia:** Machine Learning & Software Development Scholarship (Jul 2025 – Oct 2025).
- **Purwadhika:** Data Science Tools and Tactics for Business Impact (May 2025).