

Zahran Alvan Putra Winarko

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Education

Institut Teknologi Bandung | B. Eng in Informatics Engineering (Computer Science) Aug 2024 – Aug 2028
Involvement: Google Developer Group on Campus ITB Curriculum Associate (2026) | Google Developer Group on Campus ITB Explorer (2025) | Wisuda Oktober Sponsorship Staff (2025) | Tutor Asrama ITB Jatinangor Staff (2025)

Project

DUITKUDW — Finance Tracker 2025

Fullstack Developer

- Built a full-stack finance web app featuring a hybrid ML prediction engine that auto-selects between Weighted Linear Regression (< 60 days data) and Holt-Winters Exponential Smoothing (≥ 60 days) to forecast monthly expenses.
- Designed a Go REST API backend with JWT + Google OAuth, integrating a Python ML subprocess via os/exec for seamless cross-language inference without a separate ML server.
- **Tech Stack:** Go, React.js, Python, PostgreSQL, Docker

SehatSehatKuatKuat — DOM CSS Traversal Engine 2025

Front End Developer

- Engineered a web app that scrapes live URLs, parses HTML into a DOM tree, and traverses it using BFS/DFS to match CSS selectors with animated step-by-step visualization.
- Implemented bonus features: Parallel BFS with goroutine worker pools and LCA Binary Lifting for Lowest Common Ancestor queries on the DOM tree.
- **Tech Stack:** Go, Next.js, TypeScript, Tailwind CSS, Docker

EduHub — Desktop Learning Management System 2025

Fullstack Developer

- Co-developed a desktop LMS (5-person team) serving teachers and students with material management, forum, leaderboard, and a rating system across 12 relational database tables.
- Owned the Quiz module end-to-end: CRUD for multiple-choice quizzes, student answer submission, and automated scoring with persistent leaderboard integration.
- **Tech Stack:** Java, JavaFX, SQLite, Maven

Alvacodee Web — Personal Portfolio 2025

Front End Developer

- Shipped a personal portfolio site with an embedded AI chatbot (Google Gemini 1.5 Flash) that answers visitor queries about projects and skills via a Next.js serverless API route.
- Reduced server latency and network costs by offloading static asset delivery to cloud storage.
- **Tech Stack:** Next.js, TypeScript, Tailwind CSS, Gemini API, Vercel

Experience

Google Developer Student Clubs ITB — Bandung, Indonesia 2025

Explorer — Path AI

- Completed an intensive AI curriculum spanning Python fundamentals, classical ML, deep learning, NLP, and large language model concepts across 7 structured learning sessions.
- Applied hands-on implementations of regression, classification, clustering, and sentiment analysis on real-world datasets using scikit-learn and NLTK.

Wisuda Oktober HMIF ITB 2025 — Bandung, Indonesia 2025

Staff — Sponsorship Division

- Managed a pipeline of 50+ potential sponsors via structured spreadsheet tracking, monitoring outreach stages and funding status to maintain zero missed follow-ups.
- Executed strategic outreach to 50+ corporate partners and startups, securing funding commitments through coordinated negotiation with external stakeholders.

Asrama ITB Jatinangor — Bandung, Indonesia 2025

Tutor — Discipline and Environmental Health

- Oversaw discipline and environmental cleanliness for a dormitory of 100+ residents, enforcing standards and resolving issues proactively.
- Organized recurring health and hygiene campaigns, fostering a culture of well-being and collective responsibility among residents.

Skills

Languages: Go, Python, C/C++, TypeScript/JavaScript, Java

Frameworks: FastAPI, Next.js, React,

Infrastructure: Docker, PostgreSQL, Git, GitHub, Google Colab, Google Cloud Platform, Supabase, Vercel, Koyeb, Azure