

IMANUEL SEBASTIAN GIRSANG

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EDUCATION

INSTITUT TEKNOLOGI BANDUNG

2022 – 2026

Bachelor of Engineering in Computer Science | Expected October 2026 - GPA: 3.90/4.00

Recipient of the **Paragon Scholarship Program**, a full scholarship awarded by **Paragon Technology and Innovation**.

PROFESSIONAL EXPERIENCE

Paper.id

Sep 2024 – Sep 2025

Full-stack Engineer Intern

- Engineered a custom report-generation system using Go and Angular, enabling **10+** enterprise clients to create and download reports beyond the platform's standard offerings.
- Built an automated reporting scheduler for an FMCG client, eliminating manual daily and weekly report preparation and reducing turnaround from **hours to minutes**.
- Developed custom invoice templates using Angular and Blade PHP for **2** enterprise clients processing **500+** monthly transactions.
- Delivered Buyer and Supplier portal landing pages in PHP for marketing campaigns reaching **5,000+** potential users.

Paragon Technology and Innovation—ColorBank Project

Jul 2025 – Nov 2025

Software Engineer (Contract)

- Built an internal **color-palette management system** using Next.js, tRPC, Prisma, and shadcn/ui with **2 designers**, a **product manager**, and **another engineer**.
- Developed an analytics dashboard tracking **color usage** across **100+** products, surfacing underused palettes to support product and inventory decisions.

Programming Laboratory ITB

Sep 2025 – Dec 2025

Web Development Course Coordinator

- Led a team of 7 teaching assistants** supporting **165 students** in completing full-stack web development projects.
- Designed 2 comprehensive projects** introducing progressive web concepts: Milestone 1 (PHP/HTML marketplace with session management) and Milestone 2 (React + PHP backend with WebSocket integration, CSR/SSR rendering).
- Evaluated 18 final projects** with detailed technical feedback, covering database design, API architecture, authentication, and modern web development best practices.

Programming Laboratory ITB

Sep 2025 – Jul 2026

Object-Oriented Programming Course Assistant

- Collaborated with 6 teaching assistants** to mentor **143 students** in mastering object-oriented programming concepts using Java.
- Designed a capstone project** replicating the popular Overcooked game mechanics, requiring students to implement design patterns, multithreading, and OOP principles; **evaluated 6 team projects**.
- Created 10 comprehensive practicum exercises** covering core OOP topics: classes and objects, inheritance, interfaces, polymorphism, nested classes, generics, exception handling, Java Collections Framework, and concurrency.

Nook Indonesia

Jul 2024 – Sep 2024

Web Application Developer Intern

- Engineered a full-stack web application recreating Nook's mobile marketplace platform using Next.js, Firebase, and ShadCN UI, **achieving 100% feature parity with the mobile app across 20+ core features**.
- Implemented core marketplace features, including **property listings**, search/filtering, **real-time booking** management, and **payment processing**, supporting **200+** property listings and **50+** active bookings.
- Integrated **sign-in with Apple** for seamless **user authentication flow**.
- Deployed on Vercel with **optimized performance**, achieving **90+ Lighthouse scores** across all metrics, ensuring a seamless cross-platform user experience.

PROJECT EXPERIENCE

Freshmen Orientation (OSKM ITB) Web App

Jul 2024 – Sep 2024

Backend Lead

- Led a team of 10 developers** building backend infrastructure for OSKM ITB's orientation platform (app.oskmitb.com), serving **5,000+ new students** during the mandatory orientation program.
- Architected scalable backend services** using the T3 stack (Next.js, tRPC, Prisma, and TypeScript) and Redis for caching and session management, handling **5,000+ concurrent users at peak hours**.
- Implemented real-time features**, including a WebSocket-based chat system processing **10,000+ messages daily**, dynamic task leaderboard tracking **50+ assignments**, and an assignment management system.

- Developed a comprehensive admin panel using Next.js, ShadCN UI, and PostgreSQL, **enabling management of 50+ stores, 100+ products, and 30+ promotions.**
- Built robust CRUD systems across **7 core business entities** (stores, events, promotions, products, partnerships, pricing, and authentication).
- Designed **25+ reusable UI components** with ShadCN, **improving development efficiency and reducing future feature implementation time by 30%.**

- **Led a team of 20 developers** building the official Parade Wisuda ITB platform, serving **1,000+ graduating students** with comprehensive graduation celebration features.
- **Developed a TA Fair marketplace** connecting graduating students with prospective thesis advisees.
- **Implemented anonymous confession feature (Menfess)** for graduates to share memories and messages, processing **5,000+ submissions** and fostering community engagement.

HONORS AND AWARDS

- **Placed 4th in the Helping Hands track among 550 participants** from 216 institutions at Garuda Hacks 5.0, Southeast Asia's largest hackathon held at Universitas Multimedia Nusantara.
- **Developed "Gamble Gone,"** an AI-powered intervention platform using Next.js and OpenAI to help individuals overcome gambling addiction through personalized support, progress tracking, and behavioral intervention strategies.

- **Won 1st place among 150+ teams** in CodeFest Hackathon 2023, a national Web3 development competition organized by CodeFest Indonesia and ICP Hub Indonesia.
- **Developed a blockchain-based document verification system with a team of 5,** built on the Internet Computer Protocol (ICP), ensuring immutable document authentication and preventing forgery through cryptographic signatures.

TECHNICAL SKILLS

Programming Languages	: TypeScript, JavaScript, Go, Java, Python, SQL, PHP, C, C++, Solidity
Frameworks	: Next.js, React, Angular, Node.js, Hono, tRPC, Tailwind CSS
Skills	: Software Development, REST API, Data Structures, Software Architecture, Object-Oriented Programming, Algorithm Strategies.
Tools & Stacks	: GitHub, GitLab, Postman, WSL, Figma, MongoDB, MySQL, GraphQL, PostgreSQL, Docker, Neo4j, RabbitMQ, New Relic, Prisma ORM, Drizzle ORM
Languages	: Indonesian - Native English - TOEFL ITP 640