MUHAMMAD HILAL DARUL FAUZAN

hilalfauzan9@gmail.com | linkedin.com/in/hilaldfzn | +6281293665585 | github.com/hilaldfzn | hilaldfzn.vercel.app | Jakarta Pusat

Final year computer science student at the Universitas Indonesia with hands-on experience in software engineering and AI/ML projects, and proven leadership roles in multiple organizations. Proficient in software engineering tools, passionate about crafting innovative design solutions, and eager to gain valuable experience. I am passionate about designing and building scalable, robust software systems that integrate analytical insights from data. With a strong foundation in software development, machine learning, and programming, I aspire to develop tools and applications that optimize processes, enhance decision-making, and improve lives by combining solid engineering practices with technical expertise.

EDUCATION

Universitas Indonesia - Depok, Indonesia   August 2022 - July 2026 (Expected)
Bachelor of Computer Science | 3.42/4.00
- Courseworks: Software Engineering Project, Web Design & Development, Data Structures & Algorithms, Human Computer Interaction, Database, Deep Learning, Computer Vision

SMA Negeri 1 Jakarta - Jakarta Pusat, Indonesia   July 2019 - May 2022
Mathematic and Natural Science | 90.57/100
- Participated in the National Science Olympiad in Astronomy at the provincial-level (Jakarta) and ranked in 6th place
- Became a top 10 outstanding student in the school
- Developed strong analytical and scientific research skills

WORK AND ORGANIZATIONAL EXPERIENCES

Universitas Indonesia - Depok, Indonesia
Teaching Assistant of Calculus 2   August - December 2024
- Provided one-on-one tutoring for over 40 undergraduate students, helping them understand complex calculus concepts
- Assisted in grading and providing feedback on homework assignments, ensuring clarity and consistency in assessment
- Helped in preparing course materials, including practice problems for exam preparation

Staff of IT & Broadcast • OKK UI 2024   June - August 2024
- Designed engaging and user-friendly interfaces to enhance user experience
- Developed responsive frontend components and pages using React and Tailwind CSS for the official OKK UI website
- Contributed to the development of a website used by thousands of new students at Universitas Indonesia in 2024 for orientation and university-related information

Staff of Editorial Marketing • COMPFEST 15   April - November 2023
- Provided captioning, proofreading, translating, and copywriting services for COMPFEST publications, resulting in thousands of insights across various social media platforms
- Created and published press releases for the Grand Launching of COMPFEST 15
- Conducted interviews with speakers at the Grand Launching of COMPFEST 15

PROJECTS

MAAMS (2025)
- A NextJS and Django website app for a software engineering project course with a team of 7 individuals, a root cause validator using DeepSeek R1 model
- Served as a full-stack developer for 4 sprints, managing action items, backlogs, acceptance criteria, and developed authentication and validator features
- Developed with Scrum in collaboration with FISIP UI and supported the Philosophy of Communication course by analyzing and confirming communication-related problems

Apap Medika (2025)
- Developed a hospital management system featuring 6 microservices: Profile, Appointment, Hospitalization, Pharmacy, Insurance, and Bill services
- Designed the entire app as a UI designer, created the design system from scratch, and defined user flows
- Implemented JWT-based authentication with OAuth integration and role-based access control supporting 5 different roles
- Developed complex business including appointment scheduling, reservations, pharmacy inventory, insurance policy management, and integrated billing with payment tracking

Database Backup Utility (2025)
- Built a CLI tool in Go for automated database backup/restore supporting MySQL, PostgreSQL, MongoDB, and SQLite
- Implemented multi-cloud storage (AWS S3, GCS, Azure) with compression, encryption, and retention policies
- Developed a modular architecture with Docker, Slack notifications, and scheduled workflows

CrawlKit API (2025)
- Built a REST API for intelligent web scraping and data extraction, featuring robots.txt compliance, concurrent crawling, and real-time analytics dashboard
- The system used BeautifulSoup for HTML parsing with advanced CSS selectors
- Implemented ethical crawling practices with automatic delays and rate limiting, provided reporting capabilities for data quality monitoring

Natural Language Inference (2025)
- Developed a deep learning model for NLI to classify relationships between premise and hypothesis as entailment, contradiction, or neutral
- Used custom-built architectures with the pre-trained DeBERTa V3 model in PyTorch, trained from scratch on Indonesian and English data

Mario Object Detection (2024)
- Developed an object detection system using YOLO v11 to accurately and efficiently detect Mario characters in video datasets
- Addressed real-world challenges like lighting variability, angles, and complex backgrounds
- The system was evaluated on accuracy and processing speed, providing insights into implementing and optimizing YOLO for dynamic visual data

HoomGroom (2024)
- A web-based platform for exploring a catalog of furniture products, similar to IKEA
- Users could browse products, manage their cart, top up their balance, complete transactions, and track shipping

Marmut Music (2024)
- Developed a web application project with a concept similar to Spotify, offering music and podcast streaming along with detailed content information
- Implemented features like premium subscriptions, playlists, and charts to enhance user experience and content discovery
- Integrated a system to track usage for royalty payments to artists, songwriters, and labels, ensuring accurate data processing with SQL queries

Health Admission Prediction (2024)
- Conducted exploratory data analysis to identify patient traits and disease trends, including peak admission periods and disease patterns by age and smoking status
- Built classification models to predict patient outcomes and regression models to estimate ICU stay duration
- Developed clustering models to group patients, aiming to support medical decisions, optimize hospital resources, and enhance healthcare quality

LembarPena (2023) - ***Best Web Application Award of Platform Based Programming Course 2023***
- A web and mobile application project with a literacy community theme, created using Django and Flutter
- Connected readers and authors, offering book purchasing, discussion forums, and a wishlist feature
- Designed the entire app as a UI designer, created the design system from scratch, and defined user flows

AWARDS

Kompetisi Sains Nasional (2020)
- 6th Place in the Provincial-level National Science Olympiad in Astronomy

Primagama Mencari Juara (2017)
- 1st Place and Gold Medalist in Mathematics, Provincial-level Jakarta

CERTIFICATIONS AND LICENCES

Google (2025)
- Google Digital Marketing & E-commerce

Udemy (2023)
- The Complete 2023 Web Development Bootcamp
- Java Data Structures and Algorithms Masterclass
- Java Programming Masterclass updated to Java 17
- 100 Days of Code: The Complete Python Pro Bootcamp for 2023

Sololearn (2023)
- JavaScript Intermediate

SKILLS AND TOOLS

Python, Java, Go, Flutter, TypeScript, JavaScript, Next.js, React.js, Vue.js, Tailwind CSS, Spring Boot, Django, Fast API, Flask, PostgreSQL, MongoDB, Google Cloud, Docker, Git, Figma, UI/UX Design, PyTorch, TensorFlow