



MUHAMAD HILMI HAIDAR

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Bogor, Indonesia

AI Specialist | Machine Learning Engineer | Software Developer
Fresh graduate in Computer Engineering with GPA 3.51, experienced in building and deploying predictive models, real-time sensor data applications, and AI-driven solutions. Skilled in machine learning (MLP, LSTM, ARIMA), time series forecasting, and integration of AI systems into software applications. Internship at BRIN enhanced expertise in applying AI for critical environmental prediction and decision support systems.

Work Experiences

Badan Riset dan Inovasi Nasional RI (BRIN RI) - Bandung, Indonesia Jun 2024 - Sep 2024

Intern

- Developed and optimized AI-driven forecasting models (LSTM, ARIMA, MLP), achieving 15% accuracy improvement and reducing RMSE by 20%, enabling early-warning systems for radioactive dispersion scenarios.
- Processed and analyzed 200,000+ meteorological records (wind direction, wind speed, temperature, humidity, rainfall) to build predictive datasets.
- Optimized time series forecasting models, reducing RMSE by 20% and improving robustness against noisy data.
- Collaborated with a research team to optimize model performance and integrate insights into a real-world early-warning system.
- Developed end-to-end pipelines using Python, Pandas, Scikit-learn, PyTorch, Matplotlib, Git, and VS Code, cutting preprocessing time by 30%.

Education Level

Universitas Telkom - Bandung, Indonesia Aug 2021 - Aug 2025

Bachelor of Computer Engineering, 3.51/4.00

- Final Thesis: Cuacane – Real-time Weather Application, a full-stack weather application integrating real-time sensor data, ML-based wind prediction (MLP with multi-horizon forecasting), and Gaussian Plume dispersion simulation for nuclear safety research in collaboration with BRIN.
- Head of Entrepreneurship Dept. HMTK – led 3+ branding & merchandise projects for 300+ students
- Laboratory Assistant at i-Smile Lab – mentored 60+ students in AI modules (Search, Fuzzy, Genetic Algorithms)

Organisational Experiences

Himpunan Mahasiswa Teknik Komputer (HMTK) - Bandung, Indonesia Dec 2024 - Aug 2025

Head of Entrepreneurship Department

- Led the Entrepreneurship Department to strengthen the identity and unity of the Computer Engineering student body through brand-focused initiatives.
- Directed 3+ branding and merchandising projects, reaching 300+ students and enhancing the organization's identity.
- Managed budget allocation exceeding IDR 50 million for production of official apparel (PDH and jackets) and student merchandise.
- Coordinated with 4 vendors to ensure timely rollouts, achieving 100% on-time delivery across initiatives.
- Led a 5-member team, fostering a collaborative culture and boosting internal engagement by 25% through creative campaigns.

Himpunan Mahasiswa Teknik Komputer (HMTK) - Bandung, Indonesia Oct 2023 - Dec 2024

Staff - Entrepreneurship Department

- Supported execution of 3 major apparel and branding initiatives, ensuring availability for 200+ students.
- Assisted with operational and logistical planning, improving efficiency of department workflows by 30%.

i-Smile Laboratory - Bandung, Indonesia Jun 2024 - May 2025

Inventory Coordinator

- Managed and documented 100+ lab items across electronics and research equipment, ensuring 100% traceability.
- Conducted regular stock evaluations and condition audits, helping maintain laboratory readiness for academic and research use.
- Flagged shortages and damage reports for timely procurement and repair coordination.
- Improved inventory system efficiency by 20% through structured tracking templates.
- Collaborated with lab supervisors to align inventory status with budgeting and procurement planning.

i-Smile Laboratory - Bandung, Indonesia Jun 2024 - Dec 2024

Laboratory Assistant

- Delivered practical instruction to 60+ students across 4 AI modules (Search Algorithms, Fuzzy Logic, Genetic Algorithms, Defuzzification).

- Assisted in organizing lab sessions, preparing instructional materials, and maintaining lab equipment to ensure smooth and safe operations.
- Collaborated with academic staff to evaluate student performance and enhance practicum content based on feedback and learning outcomes.
- Contributed to the development of students' computational thinking and real-world application of AI techniques.

Grab It Fast 2023 - Bogor, Indonesia

Sep 2022 - Jul 2023

Public Documentation Team Member

- Contributed to the documentation and visual content creation for Grab It Fast 2023, a major student-organized national event.
- Produced 20+ live report content pieces on Instagram, increasing online engagement by 35% during event day.
- Collaborated in a 10-person documentation team to ensure consistent branding across event communications.
- Contributed to design and compilation of 100+ documentation assets for pre- and post-event publishing.

Skills, Achievements & Other Experience

- **Certification** (2025): Udemy – Machine Learning A-Z: AI, Python & R + ChatGPT Prize
- **English Proficiency Test** (2025): LAC Telkom University - CEFR B2 (Upper Intermediate) valid until 2027
- **Soft Skills:** Team Leadership & Collaboration, Project Management, Strategic Planning, Problem Solving & Critical Thinking, Communication (English & Bahasa), Attention to Detail Adaptability, Marketing & Branding
- **Hard Skills:** Machine Learning & Deep Learning Python (Pandas, Scikit-Learn, PyTorch), Time Series Forecasting, Data Analysis & Visualization, Artificial Intelligence (AI), Software Development (Desktop Apps), Web Development (React & Vercel), Business Analysis