Ifan Hakim

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Undergraduate student in Informatics specializing in Data & AI, especially in the fields of Computer Vision and Generative AI. Experienced in the Data & AI lifecycle, equipped with strong project management and business analysis skills. Passionate about applying AI to address real-world challenges with impactful and measurable solutions.

EDUCATION

Bachelor of Computer Science (B.CS.) in Informatics **Sep 2022 - Present**
Universitas Nahdlatul Ulama Yogyakarta **GPA:** GPA: 3.93/4.00

- Achieved a high GPA of 3.93/4.00 while pursuing a Bachelor's degree in Informatics with a deep specialization in Artificial Intelligence.
- Applied theoretical knowledge to co-author a published research paper and develop multiple high-impact AI projects, including a deep learning model with high accuracy.
- Demonstrated leadership and communication skills by serving as Secretary of the Informatics Student Association and being selected as a Teaching Assistant for various technology subjects.

WORK EXPERIENCE

Smart Manufacturing Intern **Oct 2025 - Present**
KALBE NUTRITIONALS (PT. SANGHIANG PERKASA) **Cikampek, Indonesia**

- Engineered an integrated HVAC Digital Twin 2.0 using Physics-Guided Machine Learning, achieving real-time optimization of HVAC performance with thermodynamic accuracy and reducing latency to under five seconds.
- Architected an automated IoT data pipeline via Node-RED to streamline historical sensor data acquisition, forming a robust foundation for continuous model training and validation.
- Developed a Low-Code Predictive Maintenance application (Mendix) to digitize inspection checklists, resulting in a 30% reduction in equipment downtime and a 25% increase in operational efficiency.

Computer Vision Engineer Intern **Sep 2025 - Present**
DATA SORCERERS **Sleman, Yogyakarta**

- Enhanced a MRI brain tumor classification web app by extending its pipeline into a multimodal framework combining medical images and textual data, resulting in a 20% increase in diagnostic context accuracy.
- Engineered preprocessing workflows for MRI datasets and medical text corpora, reducing data noise by 30% and improving data accuracy by 25%.
- Authored a research article detailing the multimodal AI system and prepared submission to a peer-reviewed journal, positioning the project as a tangible contribution to medical AI research.

Project Manager of HoDS Generative AI **Dec 2024 - Present**
DATA SORCERERS **Sleman, Yogyakarta**

- Led a team of 3 enthusiastic Generative AI learner, achieving a 20% increase in project completion rate within one months.
- Delivering module for Generative AI academy that will soon launch.
- Leading team operations, designing class curriculum, and organizing mentoring sessions.

Chief Marketing Officer **Apr 2025 - Sep 2025**
ARUTALA AKSARA **Sleman, Yogyakarta**

- Identified target market and segmented product positioning and messaging in 3 stages.
- Led the crowdfunding campaign launch strategy targeting Rp 50 million in 30 days by developing narratives, assets, and distribution plans that increased pre-campaign awareness by 40%.
- Achieved 50% organic user growth via content & education strategies.

Pricing Strategist for Solar Windows **Dec 2024 - May 2025**
PRISTINZ SOLUTIONS **Sleman, Yogyakarta**

- Designed pricing strategy for solar window using 2 methods, such as value-based and competitor analysis.
- Calculated projected profit margins within 1–2 years through strategic pricing models.
- Recommended early adopter incentives to enhance adoption and ROI potential.

AI for Medical Device Industry - Independent Study **Aug 2024 - Dec 2024**
PT STECHOQ ROBOTIKA INDONESIA **Sleman, Yogyakarta**

- Built and modified the EfficientNetB0 model for tumor classification, achieving a baseline accuracy of 98% and establishing a standardized experiment reproduction process that improved efficiency by 30%.
- Established a preprocessing and cross-validation pipeline that reduced overfitting by 80% and improved model generalization, resulting in a 18% increase in predictive accuracy.
- Served as Project Manager for the project, managing the timeline, documenting each stage of development, and presenting the final results to stakeholders and mentors, ultimately winning the “Most Collaborative Mentee” award.

SKILLS

Tech Stacks: Python, Pandas, NumPy, Matplotlib, Seaborn, Streamlit, Scikit-learn, PyTorch, TensorFlow, Keras, LangChain, Git, GitHub, Huggingface, Google Colab, Jupyter Notebook, Visual Studio Code.

Soft Skills: Project Management, Business Analysis, Collaboration, Leadership, Problem Solving, Time Management, Critical Thinking.

CERTIFICATIONS

Introduction to Financial Literacy (Credential ID: 1RXYQW2KKZVM) by **Dicoding** — **Nov 2025**
Learn Fundamental of Deep Learning (Credential ID: JLX15WE2NZ72) by **Dicoding** — **Sep 2025**
Learn Machine Learning for Beginners (Credential ID: QLZ9346RDZ5D) by **Dicoding** — **Feb 2025**
Learn Data Science Basics (Credential ID: 0LZ0R3LMNP65) by **Dicoding** — **Jan 2025**
EF SET English Certificate 67/100 (C1 Advanced) (Credential ID: r3Ff5k) by **EF SET** — **Dec 2024**
Artificial Intelligence In Industry 4.0 For Medical Device Industry by **Stechoq Academy** — **Dec 2024**
Python Fundamental for Data Science (Credential ID: #DQLABINTP1AIRUSH) by **DQLab** — **Aug 2024**
Learn Data Analytics with Python (Credential ID: 81P2NJOGOXOY) by **Dicoding** — **Aug 2024**
R Fundamental for Data Science (Credential ID: #DQLABINTR1EVMNNE) by **DQLab** — **Aug 2024**
Started with Python Programming Language (Credential ID: 1RXYL3QQ3PVM) by **Dicoding** — **Jul 2024**
Learn Artificial Intelligence Basics (Credential ID: 4EXGQ8K39ZRL) by **Dicoding** — **Jul 2024**
Learn Structured Query Language (SQL) Basics (Credential ID: 07Z60M09MZQR) by **Dicoding** — **Jul 2024**
Learn Data Visualization Basics (Credential ID: 98XWLV8W0ZM3) by **Dicoding** — **May 2024**

PUBLICATIONS

Optimizing an Expert System for Diagnosing Depression Disorder Using Case-Based Reasoning on **Jurnal Sains, Nalar, dan Aplikasi Teknologi Informasi (SNATI)** — **Jul 2024**

LANGUAGES

Indonesia (Native proficiency) • **English** (Professional working proficiency)

ORGANIZATIONAL & VOLUNTEER EXPERIENCE

Secretary — **Jul 2024 - Jun 2025**
INFORMATICS STUDY PROGRAM STUDENT ASSOCIATION — **Sleman, Yogyakarta**

- Managed and maintained all organizational documentation, ensuring accurate record-keeping for activities and partnerships, improved retrieval efficiency by 25%.
- Authored detailed meeting minutes and compiled comprehensive management reports, enhancing strategic decision-making efficiency by 30%.
- Initiated and facilitated communication to secure new partnerships, resulting in a 40% increase in the organization's network.

Mentee Batch 5 — **Sep 2024 - May 2025**
STUDENTSCATALYST — **Sleman, Yogyakarta**

- Developed a comprehensive, value-based pricing strategy for a real-world client, resulting in a projected pricing efficiency increase of 30%.
- Enhanced career-readiness by completing intensive training modules on professional branding, strategic communication, and interview preparation.
- Facilitated career-preparation programs, enhancing participants' personal development plans and expanding professional networks by over 30 connections.

Instagram Reels management — **Aug 2024 - Dec 2024**
NOVO CLUB BY PARAGON CORP — **Sleman, Yogyakarta**

- Created and delivered engaging reels that increased social media engagement by 30%.
- Edited video reels to align with current trends, increasing viewer engagement by 20%.
- Created content-planning and content-bank, increasing efficiency for daily content upload.

Coordinator of Moderators — **Oct 2024 - Oct 2024**
PyCon APAC 2024 by Python Foundation — **Sleman, Yogyakarta**

- Led and coordinated an international team of moderators to ensure the smooth execution of over 50 event sessions, resulting in a 95% satisfaction rate from attendees.
- Developed and delivered briefing materials, ensuring 100% of event issues were resolved in real-time for over 200 attendees.
- Maintained high quality and professionalism standards during Q&A sessions, resulting in a 50% increase in participant satisfaction ratings.

Events Division Committee — **Sep 2024 - Sep 2024**
GENIUS 2024 UNU Yogyakarta — **Sleman, Yogyakarta**

- Designed and organized the event flow in detail, resulting in a 100% adherence to the schedule and objectives.
- Coordinated logistical, technical, and entertainment needs across multiple divisions, resulting in a 40% increase in event efficiency.
- Executed on-site event logistics, guided over one hundred participants, and resolved unexpected challenges, resulting in a 95% satisfaction rating from attendees.

Documentation — **Aug 2024 - Aug 2024**
Indonesia Generative AI Tour 2024 Yogyakarta by AWS — **Sleman, Yogyakarta**

- Documented each event session through photography and videography.
- Managed and curated visual content for post-event publication, resulting in a 30% increase in social media engagement and enhanced internal reporting clarity.
- Collaborated with the event team and speakers to document all significant moments and presentation materials, resulting in a comprehensive report that improved future event planning by 40%.

REFERENCES

Marchel Andrian Shevchenko (Research Student at MIT | Ex AI Community Lead at Coding Collective (JCH)| Founder of Data Sorcerers | Ex AI Engineer at PT Kalbe Farma, Tbk) • Marchel Shevchenko (LinkedIn)

Septian Ardiansyah (Project Machinery Leader of Engineering Department at Kalbe Nutritionals (PT. Sanghiang Perkasa)) • septian.ardiansyah@kalbenutritionals.com

AWARDS

Excellence Awards: Outstanding Potential in Smart Environment Mapping by **International Conference on Sustainable Innovation and Technology (ICSIT'25)** **Dec 2025**

Received the Category Excellence Awards: Outstanding Potential in Smart Environment Mapping at the ASEAN Youth Innovation Competition, held in conjunction with the 2nd International Conference on Sustainable Innovation and Technology (ICSIT'25).

Finalist by **Hackvidia by Arkavidia 9.0** **Jan 2025**

Being Top 8 out of 70+ teams in the Hackathon Competition by Bandung Technology Institute, Bandung.

The Most Collaborative Mentee by **PT. Stechoq Robotika Indonesia** **Jan 2024**

In Studi Independen Bersertifikat and completing medical image classification project using Deep Learning model and improving team collaboration efficiency up to 60%.

PROJECTS

AHU & Evaporator Performance Optimization **Dec 2025 - Feb 2026**

- Engineered a high-precision predictive model for Series-Configuration AHUs (Pre & Post-Cooling), utilizing Time-Series Feature Engineering (Lag & Rolling Window) to account for thermal inertia.
- Designed a custom validation pipeline using psychrolib, cross-referencing AI predictions with Enthalpy and Humidity Ratio calculations to ensure physics-compliant outputs, increasing decision-making efficiency by 30%.
- Implemented complex dual-coil load distributions, enabling precise capacity planning and temperature control for variable room demands.

HVAC Digital Twin 2.0 & Smart Maintenance System **Nov 2025 - Feb 2026**

- Architected an end-to-end Digital Twin by consolidating Water-Side (CT-CWP-CHWP) and Air-Side (AHU) modules, creating a unified platform for holistic plant energy analysis and simulation, increasing saving estimation by 30%.
- Deployed an automated ETL data pipeline using Node-RED to capture, clean, and structure historical BMS data, establishing a reliable foundation for continuous model validation.
- Developed a Predictive Maintenance Checklist application using Mendix, digitizing manual workflows to track equipment health anomalies and streamline facility management operations.

Cooling Tower & Condenser Performance Optimization **Oct 2025 - Dec 2025**

- Developed a Physics-Guided Machine Learning (PGML) model using XGBoost to predict Cooling Tower and Condenser performance, integrating thermodynamic formulas to calculate real-time cooling loads.
- Implemented a simulation system under static data constraint and calculated saving estimation from applying configuration reccomendations around 17% in 3 days.
- Achieved optimal energy efficiency recommendations while strictly adhering to operational constraints, such as Approach Temperature and Wet Bulb variations.

Roblox App Review Sentiment Analysis **Sep 2025 - Sep 2025**

- Engineered an end-to-end sentiment analysis project to classify user reviews of the Roblox app from the Google Play Store.
- Trained and evaluated multiple machine learning models, including Random Forest, Logistic Regression, and Support Vector Machine (SVM).
- Developed a sentiment classification model that achieved 92% accuracy on the test dataset, creating a tool capable of automatically processing and categorizing thousands of user reviews to identify key areas of satisfaction and complaint.

Finote **Jul 2025 - Jul 2025**

- Developed CRUD REST API endpoints & fuzzy logic (triangular membership) for user financial classification; created a test suite to test all input combinations.
- Compiled fuzzy ranges based on local economic conditions (Special Region of Yogyakarta) so that personal finance recommendations are more relevant to target users.
- Created a fully functional and documented backend API with endpoints for all core application features, enabling the frontend team to proceed with integration and reducing estimated development time.

Pacu Jalur Trend Sentiment Analysis **May 2025 - Jul 2025**

- Performed sentiment analysis on the viral "Pacu Jalur" meme trend on platform X (Twitter) to gauge public opinion.
- Automated data labeling by implementing a pre-trained Indonesian sentiment analysis model from the Hugging Face hub.
- Analyzed over 500 tweets related to the "Pacu Jalur" trend and automatically labeled them with sentiment, providing a quantitative snapshot of public opinion.

Stylomate **May 2025 - May 2025**

- Leading a team in designing the "StyloMate" application (Virtual Try-On) from concept to final presentation during a high-pressure 24-hour competition.
- Developing a business model with revenue projections of up to IDR 2 billion per year and managed to impressing the judges with our innovation. Research and inferencing VitonHD model into MVP (Minimum Viable Product) application.

Market Campaign Segmentation & Classification **Feb 2025 - Feb 2025**

- Engineered a customer classification model using K-Means for clustering and Decision Tree for predictive analysis.

- Delivered actionable insights that could enhance marketing strategies by improving targeting efficiency up to 70%.
- Executed the entire project workflow from data cleaning to model evaluation as part of the DBS Foundation Coding Camp.

Heart Disease Prediction **Jan 2025 - Feb 2025**

- Built a predictive model to classify the presence of heart disease based on a clinical dataset, demonstrating a classic data science workflow.
- Conducted in-depth Exploratory Data Analysis (EDA) and feature engineering to prepare the data for modeling.
- Built and validated a predictive model that achieved 88% accuracy in classifying the presence of heart disease, providing a functional proof-of-concept for a potential clinical decision support tool.

Neural Network From Scratch **Jan 2025 - Jan 2025**

- Developed a complete neural network framework from the ground up using only Python and NumPy, without high-level libraries like TensorFlow.
- Implemented the core mechanics of deep learning, including forward propagation, backpropagation, and gradient descent algorithms.
- Developed a reusable, object-oriented Neural Network class in Python using MNIST datasets, integrated a fundamental mastery of core deep learning mechanics from first principles.

Brain Tumor Image Classification **Dec 2024 - Dec 2024**

- Built and modified the EfficientNetB0 model for tumor classification: achieved a baseline accuracy of 98% and established an experiment reproduction process.
- Established a preprocessing, augmentation, and cross-validation pipeline that reduced overfitting and improved model generalization.

DVD Rental's Customer Segmentation Analysis **Nov 2024 - Nov 2024**

- Implemented the K-Means algorithm to perform customer clustering and segmentation on a DVD rental dataset.
- Analyzed and visualized distinct customer groups to uncover underlying behavioral patterns.
- Validated the model's performance and cluster quality by calculating and interpreting the Silhouette Score, achieving a score of 65%.

Air Quality Analysis **Aug 2024 - Aug 2024**

- Developed an end-to-end data analysis project on air quality data from various stations in China.
- Designed an interactive dashboard using Python and Streamlit to visualize complex data trends effectively.
- Produced an interactive dashboard that visualized complex time-series data, leading to the clear identification of the top 3 stations with the highest average pollution levels and a quantifiable 20% year-over-year increase in CO levels.

Personal Portfolio Website **Jul 2023 - Aug 2023**

- Developed a fully responsive personal portfolio website from scratch using vanilla HTML, CSS, and JavaScript.
- Implemented dynamic content rendering for the project showcase, including interactive filtering and a "load more" feature.
- Created a fully responsive, live portfolio website featuring dynamic project filtering and a secure, functional contact form, delivered in a professional online presence to showcase skills and projects to potential employers.