Habib Hammam Kurniawan

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Objective

Fresh graduate with strong foundation in AI/ML and Data Science, with hands-on experience in deep learning, computer vision, and time-series forecasting. Experienced in deploying ML solutions on Google Cloud, preparing servers for training and inference, and building scalable APIs. Eager to contribute to impactful AI/ML projects with real-world deployment.

Education

Politeknik Elektronika Negeri Surabaya — **Surabaya, IND**
Bachelor Degree in Telecommunication Engineering, GPA 3.65 — *2021–2025*
Thesis: *Implemented secure V2I communication using Secret Key Generation based on LoRa technology.*

Institut Teknologi Sepuluh Nopember (ITS) — **Surabaya, IND**
Master Degree in Electrical Engineering — *2025–Present*
Research in computer vision for agriculture.

Certification & Courses

Dicoding: Belajar Penerapan Machine Learning dengan Google Cloud; Belajar Dasar AI

Google Cloud Security Badges: Google Cloud Computing Foundations: Data, ML, and AI in Google Cloud; Prepare Data for ML APIs on Google Cloud

Work Experience

Bangkit Academy by Google, GoTo (MSIB) — **Surabaya, IND**
Cloud Computing (Backend, DevOps, Cloud Architecture) — *Aug–Dec 2024*
- Deployed Machine Learning models on Google Cloud Platform (Vertex AI, Cloud Run).
- Designed cloud-based servers for ML workloads ensuring scalability, cost-efficiency, and reliability.
- Applied containerization (Docker, Kubernetes) for managing ML services and APIs.

Terra AI — **Remote, SG**
AI Engineer Internship — *Aug 2023–Jan 2024*
- Learned and applied SMOJO programming language.
- Developed AI models for various applications, including summarizing YouTube videos.

Volunteer and Organization

Group Research Mobile Communication and Security — **Surabaya, IND**
Research Assistant — *May 2020–Jun 2023*
- Developed early warning system of rice pest disease (collaboration with Universiti Teknologi Mara, MY).
- Participated in 5D world map project with Musashino University (JP).

Projects

RGB to NDVI Conversion using CycleGAN: Developed a deep learning model to convert RGB drone imagery into NDVI for agricultural monitoring, improving vegetation health analysis without NIR sensors.

Battery Internal Resistance Forecasting: Implemented LSTM and ARIMA for predicting battery internal resistance degradation trends, supporting preventive maintenance strategies.

Numerical Integration with MATLAB (Left/Right Riemann Analysis): **Description:** Implemented numerical integration methods (Left and Right Riemann sums) to approximate $\int_0^t y(\tau)\,d\tau$ for $y(t) = \sin(2\pi t) - \cos(3\pi t)$, and compared results with the analytical solution. **Challenge:** Analyzing error behavior of simple Riemann methods on oscillatory functions, interpreting under/over-estimation bias, and validating results with derivative checks. **New Skill**

Earned: Strengthened understanding of numerical analysis in MATLAB, especially error analysis, plotting comparative results, and documenting findings in LaTeX.

Academic Projects

Fibonacci Sequence Generator with MATLAB GUI: **Description:** Implemented a Fibonacci sequence generator with a simple MATLAB GUI, allowing users to input initial numbers and sequence length, then generating results iteratively. **Challenge:** Designing a compact GUI, validating incomplete/invalid inputs, and embedding Fibonacci logic inside GUI callbacks. **New Skill Earned:** Learned to build MATLAB GUI applications with `uicontrol`, validate user inputs, and dynamically display sequences in GUI environments.

Leap Year Calculator with MATLAB GUI: **Description:** Created a modern MATLAB GUI calculator to check leap years, supporting single, multiple, and ranged year inputs with automatic parsing. **Challenge:** Building robust input parsing for multiple formats, ensuring backward compatibility with MATLAB R2018a+, and handling error alerts gracefully. **New Skill Earned:** Learned advanced GUI design with `uifigure`, `uigridlayout`, and `uitable`, plus experience in string processing and error handling.

Skills

Languages: Bahasa Indonesia (native), English (intermediate)

Technical: TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, CycleGAN, Pandas, NumPy, Matplotlib, Seaborn, LSTM, ARIMA, Prophet

Soft Skills: Communication, Problem-Solving, Team Collaboration