

Muhammad Iqbal Hilmy Izzulhaq

Data Scientist | AI Engineer

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[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

Summary

A highly motivated and results-oriented Data Scientist with a passion for building intelligent and autonomous AI agents. Recently completed "The Complete Agentic AI Engineering Course," gaining hands-on experience in designing, building, and deploying autonomous agents using cutting-edge frameworks like OpenAI Agents SDK, CrewAI, LangGraph, and AutoGen. Proven ability to apply Agentic AI to solve real-world commercial problems and architect robust and scalable AI solutions.

Working Experiences

The House of Representatives, Republic of Indonesia (DPR RI) | Jakarta, Indonesia | April 2025 – Oct 2025

Data Scientist Intern

- Conducted socioeconomic analysis on SUSENAS data to support policy recommendations through Python-based data wrangling, visualization, and dashboard reporting.
- Performed NLP on Mahkamah Konstitusi verdicts to extract key constitutional issues and identify trends in judicial review cases.
- Built a Retrieval-Augmented Generation (RAG) prototype to enhance legal document search and summarization for legislative insight.
- Leveraged Dify.AI and n8n to build no-code RAG workflows, enabling efficient legal content retrieval and autonomous document summarization with a user-friendly UI.

AI Tech & Data for Corporate Training (Project-Based) | Jakarta, Indonesia | Aug 2025 – Present

RevoU

Role: Mentor / Team Lead | Clients: Bayan Resources, PT Jalin, AXA Mandiri

- Spearheaded Jalin's first corporate **AI Engineering** training, guiding non-developer employees to build AI agents for their daily tasks
- Supported corporate AI and data training programs for clients including Jalin, Bayan Resources, and AXA Mandiri.
- Ensured participants understood technical materials and could apply concepts effectively.
- Assisted in addressing technical questions and guided hands-on project implementation.
- Collaborated with instructors to align learning outcomes with business and technical goals.
- Covered materials including AI fundamentals, Generative AI, prompt engineering, and no-code automation tools (Zapier, n8n).
- Introduced data literacy concepts, such as data cleaning, visualization with Power BI, and responsible AI practices. Gathered and analyzed feedback, graded assignments/tests, and prepared final performance reports for stakeholders.

Projects

1. Career Digital Twin: > [Explore](#) > [Demo](#)

Built and deployed a personal agent to represent my skills and experience to potential employers, automating the initial stages of job applications.

2. Trader Agent Simulator – Autonomous Portfolio Management (Agentic AI)

Built an intelligent trader agent using the OpenAI Agents SDK, capable of alternating between trading and rebalancing its portfolio using real-time insights from a researcher agent. Leveraged advanced async context management for clean multi-server handling, and integrated support for multiple LLM providers (OpenAI, DeepSeek, Google, Anthropic).

3. Indonesian Parliament Activity Chatbot:

This project implements a chatbot that can answer questions about the activities and agendas of the Indonesian Parliament members. It utilizes a SQL database containing agenda data and leverages large language models (LLMs) through the Langchain library to interact with the database and provide natural language responses. **Features:** Natural language understanding in Indonesian, database interaction with SQLite, SQL query generation, natural language responses, and a Gradio web-based chat interface.

4. Telco Churn Analysis > [Explore](#)

Developed a churn prediction model using AIKNN with hyperparameter tuning, focused on minimizing false negatives. Achieved **93.7% recall**, reducing potential high-risk churn losses by **\$18.8K** and cutting total misclassification costs by **\$48.5K**, outperforming benchmark models like XGBoost and Random Forest.

5. **Airbnb Data Analysis Link > [Explore](#)**

Analyzed Airbnb listings in Bangkok to identify peak-season revenue opportunities for December. Implemented dynamic pricing, extended-stay discounts, and last-minute deals. These optimizations increased total December revenue by **7.6%**, generating an additional **฿3.9 million** in high-demand areas like Khlong Toei and Vadhana.

Education

Purwadhika Digital Technology School | BSD, Tangerang, Indonesia | October 2024 – February 2025

Modules Taken: Python Fundamentals, Data Analysis, and Machine Learning

University of Brawijaya | Malang, East Java, Indonesia | August 2019 – December 2023

Bachelor of Science in Physics (Material Science)

GPA: 3.39 / 4.00

Certificate: [Explore all of my credentials](#)

Agentic AI Engineering | Udemy | Issued July 2025

This comprehensive program provides intensive, hands-on training in designing, building, and deploying autonomous AI agents. Participants master Agentic AI architectures and frameworks, including OpenAI Agents SDK, CrewAI, LangGraph, and AutoGen, by building eight real-world projects with commercial applications. The course focuses on connecting LLMs with proven design patterns to solve complex problems.

Check the [credentials](#)

Artificial Intelligence | Kominfo's Digital Talent Scholarship | Issued September 2023

This program covers essential Artificial Intelligence (AI) aspects, including concepts, trends, and practical development. Participants will learn about traditional machine learning, deep learning, and development frameworks.

Check the [credentials](#)

Data Science & AI | DQLab (Python, R, Data Wrangling, Visualization) | Issued 2020 – 2022

DQLab is an online learning platform focused on introducing Data Science and Artificial Intelligence (AI). It provides a comprehensive learning experience using Python and SQL programming languages.

Check the [credentials](#)

Hard Skills

- | | | |
|--|--------------------------------|-------------------------------------|
| • Predictive Analytics | • Machine Learning | • Supervised Learning |
| • Recommender Systems | • Unsupervised Learning | • Hyperparameter Tuning |
| • Data Preprocessing | • Predictive Modeling | • Data Visualization |
| • Data Analytics | • Feature Engineering | • Natural Language Processing (NLP) |
| • Statistical Data Analysis | • Metrics Evaluation | • Statistical Analysis |
| • Large Language Models (LLMs) | • Time Series Analysis | • Agentic AI Workflow |
| • Dashboard Development | • Prompt Engineering | • LangChain / LangGraph |
| • Retrieval-Augmented Generation (RAG) | • OpenAI Platform & Tools | • Multi-agent Systems |
| | • Model Context Protocol (MCP) | • Chatbot Development |

Programming Languages: Python, SQL, Excel

Frameworks: OpenAI Agents SDK, CrewAI, LangGraph, AutoGen

Data Tools: Tableau, Excel (Advanced), Visual Studio Code, Google Colab, MySQL Workbench, Looker Studio, Microsoft Power BI, Cursor, Jupyter Notebook, Cursor

Soft Skills:

- | | | |
|---------------------|----------------------------|------------------------------|
| • Critical Thinking | • Problem Solving | • Adaptability/Flexibility |
| • Collaborative | • Growth Mindset | • Time Management |
| • Critical Thinking | • Analytic Problem Solving | • Teamwork and Collaboration |

Languages: Bahasa Indonesia (**Native**), English (**Limited Working Proficiency**)