Muhammad Fauza

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https://portofolio-fauza.vercel.app/

BRIEF PROFILE

I am a third year student with a strong interest in Machine Learning, Artificial Intelligence, and Data Science, with a focus on technologies such as Large Language Models, Chatbots, Computer Vision, Natural Language Processing, and Generative AI. Currently, I am also enhancing my skills in web development using HTML, CSS, JavaScript, React, FastAPI, and Next.js to create innovative, user-centric applications. I am passionate about solving challenges by integrating AI and web technologies to deliver impactful solutions.

EDUCATION

STMIK Widya Cipta Dharma

Undergraduate student in Computer Engineering GPA: 3.73 / 4.00 — **M. Yamin No.25**
2023 - Now

Asah led by Dicoding in association with Accenture

Machine Learning Cohort — **August 2025 - January 2026**

WORK EXPERIENCE

Digitalent Kominfo
Student Mentor GCP (Google cloud Platform)

- Mentored and guided 80 students in the Google Cloud Skill Boost program, achieving a 90% completion rate by providing technical assistance and resolving blockers.

Dicoding
Fasilitator Dicoding X IDCamp Data Scientist Learning Path

- Assisted a group of 25 participants in completing the program on time by providing technical guidance, mentorship, and progress monitoring.

STMIK Widya Cipta Dharma
Laboratory Assistant

- I served as a laboratory assistant at STMIK Widya Cipta Dharma, with the primary responsibilities of overseeing and assisting in student practical sessions, acting as a liaison between faculty members, grading student assignments, and performing maintenance on software and hardware.

Google x Dicoding
Google Cloud Arcade Fasilitator

- Assisted 100+ participants in a gamified cloud education program. Facilitated learning in Google Cloud technologies and AI/ML, supported participants in completing hands-on labs and earning badges, and drove engagement through coaching, progress tracking, and community outreach initiatives.

PROJECT EXPERIENCE

1. AI Food Recommendation Chatbot – RAG-Based Food Finder
   - Description: This project focused on building a food recommendation chatbot powered by Retrieval-Augmented Generation (RAG). The system integrates LangChain, AWS Bedrock, and Qdrant to retrieve relevant restaurant data scraped from Instagram food reviewers. The chatbot provides personalized food recommendations in natural language, enhanced with restaurant cards containing key details such as location, opening hours, menu highlights, and pricing.
   - Technologies Used: Python, LangChain, AWS Bedrock, Qdrant, Next.js, pandas, FastAPI.
   - Methods Applied: I implemented a vector database (Qdrant) for semantic search, combined with real-time context filtering based on meal times (breakfast, lunch, dinner, late night). Metadata from the dataset was normalized to ensure consistent retrieval, and a prompt engineering strategy was applied to guide the chatbot in generating conversational yet informative responses.
   - Results: Engineered an end-to-end food recommendation system that delivers both narrative chatbot responses and structured restaurant cards. The deployed chatbot successfully recommends context-aware food options and prevents irrelevant results by aligning with current time and dataset metadata.

   Link Project: https://food-recomendation-chatbot.vercel.app

2. Sales Forecasting

- Description: This project focused on sales forecasting using historical transaction data. I implemented an LSTM model to capture seasonal patterns and an ARIMA model for statistical forecasting. The analysis involved visualizing sales trends and performing weekly aggregation to reduce volatility.
- Technologies Used: Python, TensorFlow, statsmodels, pandas, matplotlib, Streamlit.
- Methods Applied: I compared the performance of the LSTM and ARIMA models using MAE, MSE, and RMSE metrics to determine the best-performing model. Data preprocessing included handling missing values and feature normalization.
- Results: Engineered an end-to-end forecasting system comparing LSTM and ARIMA models. The deployed LSTM model successfully reduced prediction error (RMSE) by 15%, providing more reliable data for inventory management.

Link Project: https://sales-forecasting-fauza.streamlit.app/

3. Customer Churn Prediction

- Description: This project aimed to predict customer churn using machine learning models. I was responsible for data analysis, preprocessing, and feature engineering, including the creation of the Customer Lifetime Value (CLV) feature to enhance model accuracy.
- Technologies Used: Python, scikit-learn, pandas, matplotlib, Streamlit.
- Methods Applied: I employed supervised learning algorithms, including Logistic Regression and Random Forest, to classify customers at risk of churn. Model evaluation was carried out using accuracy, precision, recall, and F1-score metrics.
- Results: Developed and deployed an interactive web application using Streamlit that achieved 85% accuracy in predicting customer churn. The tool enables business teams to directly identify at-risk customers for targeted retention campaigns.

Link Project: https://customer-churn-project-fauza.streamlit.app/

ONLINE COURSE CERTIFICATION

Data Sciences

- starting programming with Python, *Dicoding*
- Python Fundamentals, *Coding Studio*
- Learning the Basics of Structured Query Language (SQL), *Dicoding*
- Learning Data Visualization, *Dicoding*
- Learning the Basics of Data Science, *Dicoding*
- Learning Data Analysis with Python, *Dicoding*
- Learning the Application of Data Science, *Dicoding*

Machine Learning

- Learning Machine Learning for Beginners, *Dicoding*
- Learning the Fundamentals of Deep Learning, *Dicoding*
- Applied Machine Learning, *Dicoding*
- Building Machine Learning Systems, *Dicoding*

Web Development

- Learning the Basics of Web Programming Dicoding
- Learning the Basics of JavaScript Programming, *Dicoding*
- Learning to Build Back-End Applications for Beginners, Dicoding

SKILL

- **Languages:** Python, JavaScript, SQL, C++, Java
- **AI/Machine Learning:** Scikit-learn, TensorFlow, Pytorch, Pandas, NumPy, OpenCV, NLP (LangChain), LLMs, Supervised & Unsupervised Learning
- **Web & Deployment:** FastAPI, Next.js, React, HTML/CSS, Streamlit, Vercel, GCP (Google cloud Platform)
- **Tools & Platforms:** Git, Docker, Jupyter Notebook

SOCIAL MEDIA

- Linkedin: https://www.linkedin.com/in/muhammad-fauza
- portofolio: https://portofolio-fauza.vercel.app/
- Github: https://github.com/Fauza27