Muhammad Hilmy Putra Risma

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SUMMARY

Motivated and detail-oriented Mathematics graduate with a deep focus on data analytics and nearly three years of dedicated experience through academic projects and certified coursework. Skilled in data processing, visualization, and statistical modeling using Python, SQL, Excel, and Tableau. Passionate about the integration of mathematics, IT, and business to drive impactful, data-driven decisions and contribute meaningfully to real-world problem-solving.

SKILLS

- **Data Analysis & Machine Learning:** Python with libraries like SciPy, Pandas, Matplotlib, Scikit-Learn, TensorFlow, Keras.
- **Natural Language Processing:** GPT, Gemini, Gemma, DeepSeek
- **Data Management & Querying:** Excel, Google BigQuery, MySQL, PostgreSQL.
- **Data Visualization & BI Tools:** Tableau, Looker Studio, PowerBI.

EXPERIENCE

Business Database Analyst | PT Pegadaian · Internship   **Aug – Dec 2023**

- **Data Collection & Analysis:** Utilized SQL, Excel, and Google BigQuery to gather and analyze financial data, providing actionable insights to support business marketing decisions.
- **Data Visualization:** Developed interactive dashboards using Tableau and Excel, including a geographic potential map by analyzing customer distribution across 7 regions with population data, and a daily-updated KPI monitoring dashboard for 64 outlets to help branch managers track performance trends.
- **Predictive Analysis:** Conducted a three-year analysis on Outstanding Loan (OSL) data and performed forecasting using the ARIMA time series model, achieving a forecast accuracy of 97%.
- **Campaign Planning & Reporting:** Developed and tracked marketing campaign plans and reports in Excel, ensuring timely execution and performance monitoring.

EDUCATION

- **UNIVERSITY OF INDONESIA**   **Aug 2020 – Jan 2025**
  B.Sc. in Mathematics (Specialization: Data Sciences)
  Emphasized Data Analysis, Statistical Modeling, Machine Learning, and Deep Learning

PROJECTS

- **User Retention Analysis via A/B Testing in Cookie Cats**   **May 2025**
  Conducted A/B testing using Python to analyze the impact of moving a game progression gate in Cookie Cats. Performed data cleaning, statistical analysis, outlier removal, and hypothesis testing to evaluate player retention and engagement. Visualized results to support actionable product insights.
  Keywords: A/B Testing, Statistics, Hypothesis Testing, Player Retention
  Repository: github.com/MuhammadHilmyPutraRisma/ab-test
- **Comparative Evaluation of Multi-Large Language Model APIs for Sentiment Analysis**   **Apr 2025**
  Developed a sentiment analysis system in Python integrating DeepSeek, Gemini, and GPT APIs to evaluate 2,400+ text samples; conducted multi-model classification analyzing accuracy, response time, and API cost; visualized results with confusion matrices achieving up to 99% accuracy.
  Keywords: Sentiment Analysis, Natural Language Processing , Large Language Models, Machine Learning
  Repository: github.com/MuhammadHilmyPutraRisma/multi-llm-sentiment
- **Comparison of In-Context Learning in GPT for Sentiment Analysis Level Topic**   **Jan 2025**
  Performed topic-level sentiment analysis on Tokocrypto app reviews by scraping data from the Play Store and App Store. Applied three in-context learning techniques using GPT models, with the best method achieving 99% accuracy. Utilized BERT for data representation and EFCM for topic clustering, identifying key topics with representative keywords for interpretation.
  Keywords: Topic-Level Sentiment Analysis, In-Context Learning, GPT, BERT-EFCM
  Repository: github.com/MuhammadHilmyPutraRisma/tokocrypto-sentiment
- **Bitcoin Price Forecast with ARIMA Model**   **Jan 2023**
  Developed ARIMA models in Python and R to forecast Bitcoin prices seven days ahead. Achieved high accuracy with an average RMSE of under $200. Effectively visualized and presented insights and predictions to academic assessors, demonstrating strong forecasting and communication skills.
  Keywords: Time Series Forecasting, Statistical Modeling, ARIMA Model, Predictive Analytics
  Repository: github.com/MuhammadHilmyPutraRisma/bitcoin-arima-forecast

CERTIFICATES

- **Deep Learning Specialization** – DeepLearning.AI, May 2025
- **Machine Learning Specialization** – Stanford University, May 2025
- **Mathematics for Machine Learning** – Imperial College London, Apr 2025
- **Transforming Data into Action** – RIS Consulting, Feb 2025
- **Google Data Analytics Specialization** – Coursera, Jul 2023
- **RevoU Mini Course: Data Analytics** – RevoU, Jul 2023