Karisa Zihni Lutfiana

karisazihnil@gmail.com | +62 813 2750 5756 | West Jakarta, Jakarta
github.com/karisazi | karisazi.github.io

About Me

Machine learning practitioner skilled in Python and ML frameworks, with hands-on experience in NLP, computer vision, and structured data. Eager to contribute as a Machine Learning Engineer.

Skills

- **Programming languages:** Python, JavaScript, SQL
- **Programming Frameworks:** Scikit-Learn, TensorFlow, XGBoost, OpenCV, Pandas, Numpy, Matplotlib, Seaborn
- **Machine Learning Techniques:** Supervised & Unsupervised Learning (Regression, Classification, Clustering), Deep Learning (ANN, CNN, RNN), Imbalanced Data Handling, Threshold Tuning, Model Evaluation, Generative AI (LLMs)
- **Natural Language Processing:** Text Classification, TF-IDF, Stopword Removal, Tokenization, Feature Extraction
- **Deployment:** Flask, FastAPI, Docker, RESTful APIs, GCP (Vertex AI, BigQuery, Cloud Storage), MLflow, Git

Portfolio Projects

Fake Job Posting Detection – *GitHub Repo* *July 2025*

- Developed a binary classifier to detect fake job listings using a highly imbalanced dataset (855 of 17,589).
- Combined TF-IDF text features with encoded metadata into a unified sparse matrix for model training.
- Achieved **F1-score 0.84**, **precision 0.89**, and **recall 0.79** on fraud class using **XGBoost**.
- Tuned threshold for Logistic Regression; compared with XGBoost, CatBoost, Random Forest, and SGD using MLflow.

Beame – *GitHub Repo* *April 28 – May 16, 2025*

- Created a real-time webcam-based system that detects individuals and greets them with a personalized "Hi [Name]".
- Used Haar cascades to detect faces and eyes, then applied wavelet transformation to extract meaningful features.
- Trained an SVM model to classify faces into 4 categories, achieving **91% accuracy** and an **F1-score of 0.91**.
- Integrated OpenCV in pipeline for image handling, transformation, and face detection, enabling smooth video processing.

DataJobsPay – *GitHub Repo* *March 23 – April 17, 2025*

- Developed a machine learning model to predict data science job salaries using 6,000+ curated Kaggle job listings.
- Implemented Ridge Regression with hyperparameter tuning (GridSearchCV), achieving **MAE ≈ $40K**.
- Performed feature engineering and built a scikit-learn pipeline to encode categorical features.
- Interpreted model coefficients to identify key salary predictors**:** currency, experience level, residence, and job title.

Certifications & Programs

Google Cloud Skills Program – JuaraGCP | Google Cloud (Indonesia) | *bit.ly/GoogleDevCertifs-Karisa* *Feb – March 2025*

- Completed labs on Compute Engine, BigQuery, Cloud Functions & AI APIs; deployed VMs and queried datasets.

Bangkit Academy – Machine Learning Cohort | Google, GoTo, Traveloka | *bit.ly/BangkitTranscript-Karisa* *Feb – July 2023*

- 900+ hours on Python and TensorFlow; built CNN waste classifier (85% acc) and deployed via Flask + GCP.

Experience

Python Developer – Musk Boga *December 2024 – February 2025*

- Developed and maintained backend components for web applications using Django and PostgreSQL database.
- Designed and implemented RESTful APIs to enable seamless integration with frontend systems.

AI Engineer– Angusta System *March 2024 – May 2024*

- Developed automatic system API for retrieval information that automatically cleans data and generates prediction results using Flask and AutoML.
- Assisted in image data collection and selection; curated and validated data to ensure quality and usability for model development.

Publication

K. Z. Lutfiana, *"A Mobile Application CODEC (Color Detection) for Color-blind People using KNN,"* 8th Int'l Conf. on Informatics and Computing (ICIC), 2023. [View Publication]

Education

Diponegoro University, Computer Engineering | Bachelor of Engineering | Semarang, Indonesia | 2019 – 2023

- Cummulative GPA: 3.89/4.0, Best Graduate 2023
- TOEFL ITP: 555 (Nov 2023)