

DANISH RAFIE EKAPUTRA

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SUMMARY

Highly motivated and enthusiastic Data Science student with a deep-seated interest in uncovering insights from data and a growing focus on machine learning research. Driven by a passion for innovation, continuously strive to master new technologies and apply them to solve challenging problems. With a strong educational background in technology, eager to contribute actively and grow in a world full of data-driven possibilities.

EDUCATION

Institut Teknologi Sepuluh Nopember <i>Undergraduate Bachelor of Data Science, Current GPA: 3.52/4.00</i>	Surabaya, Indonesia Jul 2023 – Present
SMAN 2 Bondowoso <i>Mathematics and Natural Sciences</i>	Bondowoso, Indonesia Jul 2020 – Jul 2023

PUBLICATIONS

Multimodal Deep Learning for Online Gambling Promotion Detection on Indonesian Social Media Published, Jun 2026

- Proposed a multimodal fusion deep learning approach for detecting online gambling promotions on Indonesian social media, utilizing both image and text modalities, and contributed the first publicly available multimodal dataset (5,028 annotated samples from Facebook, TikTok, and X) for this task.
- Published in *Jurnal Statistika dan Komputasi* (SINTA 2), 5(1), 41–60. DOI: [10.32665/statkom.v5i1.6412](https://doi.org/10.32665/statkom.v5i1.6412).

MANUSCRIPTS UNDER REVIEW

Signer-Independent SIBI Recognition: A Benchmark of Skeleton and Pretrained Models 2026

- Benchmarked five sign recognition models on 114 isolated signs of the Indonesian Sign System (SIBI) recorded by 22 signers, testing every model on new signers with leave-one-signer-out cross-validation.
- Showed that the signer-dependent protocol of earlier work overstates accuracy: the earlier BiLSTM fell from 97.29% to 85.72% on new signers, while a fine-tuned Uni-Sign reached 95.16%.
- Released the code on [GitHub](https://github.com) and the fine-tuned model on [Hugging Face](https://huggingface.co).

Adapting Point-Based Crowd Counting to Power Battery Detection 2026

- Adapted APGCC (Auxiliary Point Guidance Crowd Counting) to count anode and cathode plates and locate their endpoints in battery X-ray images from the PBD5K benchmark, adding a density-map counting head and structure-aware decoding based on the periodic plate arrangement and the anode = cathode + 1 relation.
- Achieved a mean PN-ACC (pair number accuracy) of 0.8689 over the three difficulty splits of the 2,000-image test set, compared with 0.7976 for the reference method MDCNeXt rescored with the official evaluator.

GeoSEAN11K: Separating Text and Scene Evidence for Country-Level ASEAN Image Geolocation 2026

- Developed GeoSEAN11K, a route-balanced dataset of 11,000 street-level images spanning 11 ASEAN countries, with separate text-bearing and no-text subsets.
- Designed complementary country-level geolocation pipelines for text-bearing and no-text scenes using Gemma 4 26B and MaxViT-Small, respectively.

GeoSEAN: Explainable Country-Level Image Geolocation for ASEAN Regions 2026

- Developed an explainable country-level image geolocation pipeline for 11 ASEAN countries using CLIP zero-shot classification, LightGBM, and MLP models, achieving 85.91% accuracy and F1-score with the MLP classifier.
- Analyzed visual evidence using CLIP attention rollout, YOLO26 object detection, and Energy Based Pointing Game metrics. Preprint available at [arXiv:2607.12284](https://arxiv.org/abs/2607.12284).

AWARDS & ACHIEVEMENTS

F.I.R.E Scholarship Awardee, MEXC Foundation & TRIV	Jan 2026
Selected as one of only 8 recipients from hundreds of applicants across 6 top Indonesian universities for the Future Innovators in Rising Economy (F.I.R.E) Scholarship, receiving full one-semester tuition support and mentorship in blockchain and Web3 innovation.	
Finalist, Data Mining by Intellecta Cup Telkom University	Nov 2025
- Developed a machine learning regression model to predict Average Temperature °C. - Achieved a MAPE score of 83.9, which secured a position in the top 3 among national competitors.	
Finalist, Sebelas Maret Statistics Data Science (SSDS)	Aug 2025
- Developed a machine learning regression model to predict Daily Rainfall Total (mm). - Achieved an MSE score of 17.05, which secured a position in the top 6 among national competitors.	

Finalist (Top 3), Data Quest by Data Science Indonesia

Jun 2025

- Developed a machine learning classification model to predict customer term deposit subscriptions.
- Achieved an AUC-ROC score of 0.7982, ranking first on the preliminary leaderboard and reaching the top 3 in the national final.

Best Methodology Award, Technology Development KRTI

Sep 2024

- Awarded for a superior and systematic methodology in the Technology Development division, recognizing the comprehensive design and engineering process of the team's UAV.

EXPERIENCE

Data Scientist Intern

Jan 2026 – Feb 2026

Enciety Business Consult

Surabaya, Indonesia

- Developed an interactive Power BI dashboard for Telkomsel loan analysis, providing insights into loan performance and customer behavior.
- Conducted data-driven business analysis to support Kebab Turki Baba Rafi's expansion strategy, identifying potential markets and growth opportunities.

Member of Data Scientist Division

Nov 2024 – Present

Avalon AI Community

- ML/DL development program covering model implementation and advanced methods such as Causal Inference, Ensemble Learning, Time Series Modeling, and advanced feature extraction for image and audio data.

Flight Controller Division

Dec 2023 – Aug 2025

Bayucaraka UAV Research Team ITS

Surabaya, Indonesia

- Engineered and programmed the flight controller system by building upon the ArduPilot open-source platform, to implement custom control algorithms.

TEACHING EXPERIENCE

Teaching Assistant, Data Mining

Feb 2026 – Jun 2026

Institut Teknologi Sepuluh Nopember

Surabaya, Indonesia

- Guided students through Python-based practicum sessions covering the full data mining pipeline: data preprocessing, dimensionality reduction (feature selection & extraction), association rule mining, unsupervised learning (K-Means, K-Mode, K-Prototype), supervised learning (Decision Tree, Naïve Bayes), and model evaluation for classification and regression tasks.

Machine Learning Instructor, Statistical Computer Course (SCC)

Feb 2026 – Present

Institut Teknologi Sepuluh Nopember

Surabaya, Indonesia

- Taught data cleaning techniques (missing value imputation, duplicate removal, format standardization), exploratory data analysis with visualization, and fundamental ML algorithms (KNN, Decision Tree) including evaluation metrics and hyperparameter tuning with Grid Search, Random Search, and Optuna.

Teaching Assistant, Sampling Techniques and Data Wrangling

Aug 2025 – Dec 2025

Institut Teknologi Sepuluh Nopember

Surabaya, Indonesia

- Guided students in applying sampling theories and data wrangling techniques through Python-based lab sessions for data cleaning and transformation, as well as practical sessions and exercises.

Teaching Assistant, Exploratory Data Visualization

Feb 2025 – Jun 2025

Institut Teknologi Sepuluh Nopember

Surabaya, Indonesia

- Guided students through practical sessions on exploratory data visualization using Power BI, R, and Python, including Matplotlib, Seaborn, and Plotly.

SKILLS

Programming Languages: Python, R, SQL, C++**ML & Deep Learning:** Computer Vision, Multimodal Learning, Vision-Language Models, NLP, Pose Estimation, Time Series, Explainable AI, Classification, Regression, Clustering, Feature Engineering, Hyperparameter Tuning**ML Frameworks:** PyTorch, TensorFlow/Keras, Transformers, Scikit-learn, LightGBM, AutoGluon, Optuna, OpenCV, MediaPipe, Spark MLlib**Data & Visualization:** Pandas, NumPy, PostgreSQL, Power BI, Matplotlib, Seaborn, Plotly, R Shiny**Tools & Platforms:** Git/GitHub, Linux, Hugging Face, Google Colab, L^AT_EX, Figma, ArduPilot, ROS 2**Languages:** Indonesian (Native), English (Professional Working Proficiency)