RESTU ANGGORO KASIH

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Mathematics graduate with a solid foundation in Data Science, Machine Learning, and AI implementation. Skilled in end-to-end data project management, including preprocessing, model development, hyperparameter optimization, and performance evaluation. Proficient in statistical modeling, algorithm design, and programming, with practical experience in traditional AI, deep learning, and Large Language Models for generative applications. Proficient in Python, SQL, and modern AI frameworks, with proven ability to integrate analytical insight and automation into practical, scalable solutions.

EDUCATION

YOGYAKARTA STATE UNIVERSITY *Sleman, IDN*
Bachelor of Science; Major in Mathematics *2021 - 2025*
- Cum Laude with Cumulative GPA: 3.64/4.00

EXPERIENCE

Media Staff (Internship) Grogol Village, Paliyan District, Gunung Kidul Regency *Jul 2023 – Aug 22023*
Conversion activity within the Student Organization Capacity Building Program (PPK Ormawa).
- Drafted 4 official reports of village activities and documented more than 3 events.
- Managed and adjusted the content of the village website on WordPress to match the new template and design.

Research Assistance *May 2024 – Jul 22024*
- Entered research data into Word documents totaling over 3,000 pages.
- Ensured format consistency and corrected errors according to guidelines on over 1,000 pages.

Freelance *Jul 2025 - Present*
Provide freelance services independently and through various platforms.
- Completed over 10 freelance projects independently and through various digital platforms.
- Responsible for building Machine Learning/Deep Learning models, performing data entry, data annotation, data management and scraping, developing websites, creating Roblox games, and academic projects.
- Communicated effectively with clients to ensure deliverables met client expectations and.

PROJECTS

Tea Leaf Disease Classification (Undergraduate Thesis)
- Developed an EfficientNetV2S-based image classification model via transfer learning to detect and classify 6 tea leaf diseases, achieving 98.33% accuracy on the validation set.
- Improved model performance from 94.33% to 98.2% through hyperparameter tuning, data augmentation, and architecture optimization.
- Applied preprocessing techniques (normalization, contrast enhancement, augmentation) on 1,500 images, enhancing feature extraction, generalization, and achieving high evaluation metrics (Precision 98.33%, Recall 98.36%, F1-score 98.33%, AUC 0.9976).

Land Use Land Cover (LULC) Classification & Web Deployment (Internship Report)
- Designed an LULC classification system using Google Earth Engine (GEE) and Python, processing Sentinel-2 imagery with CNN, achieving 90.31% accuracy and Cohen's Kappa 85.49%.
- Built and deployed a Flask and a React.js, improving accessibility and scalability for geospatial data analysis.
- Enabled automatic area calculation for 4 land cover types (Water, Building, Plantation Forest, Herbaceous).

AI Meeting Summary
- Built a AI system using open-source models from Hugging Face and OpenAI (Whisper, Pyannote, Wav2Vec2) for speech, diarization, and emotion detection, integrated with real-time summarization via FastAPI and Next.js.
- Implemented structured summarization and contextual Q&A using OpenRouter LLMs with automatic fallback and RAG-based memory via ChromaDB and SQLite.
- Designed a scalable, asynchronous streaming architecture supporting multimodal processing (audio and text) with consistent Markdown summaries and efficient API communication between services.

Customer Segmentation Using Birch Clustering
- Built a BIRCH model to segment 2,000+ customers by purchasing behavior and demographics, optimizing clusters via the Elbow Method, PCA, and feature selection (Silhouette 0.695; DBI 0.440).
- Derived actionable insights by analyzing spending behavior, identifying 3 core customer segments, and informing marketing strategies to boost campaign effectiveness.

Talent Match Intelligence System
- Built an AI-driven HR analytics dashboard using Streamlit, Supabase, and A4F API.
- Identified and visualized success patterns from employee data, implementing SQL-based talent matching logic
- Integrated AI-generated job profiles and deployed an interactive dashboard via Streamlit Cloud.

Bank Fraud Transaction
- Conducted EDA and feature engineering on 2,512 transactions, achieving high-quality dataset.
- Built an ensemble of 7 unsupervised models (e.g., Isolation Forest, LOF, GMM) to detect 59 anomalies (2.35%) using majority voting (≥4 models); validated by domain fraud rules.
- Derived key insights: anomalies showed 115% higher amounts, impossible travel (>2,000 km/h), peak fraud at 17–18h, and high anomaly rates in debit/branch channels.

ORGANIZATION

Mathematics Student Association *2022*
Staff, IT Division
- Maintained and repaired hardware (1 computer, 1 router, 2 printers) on a 4-day rotation system.
- Installed and managed 30+ software and OS applications for members.
- Produced 11 video and image publications on technology topics in coordination with the communications and publication team.

Engineering and Technology Club (INFINITE) *2023*
Staf, Competition Division
- Conducted research and monitoring of more than 15 IT-related competitions, gathering and distributing relevant information to members.
- Managed an archive of over 25 competition-related documents, including proposals and other documentation.

Student Executive Board *2023*
Staff, Research, Data, and Digital Products
- Analyzed and visualized 10+ survey datasets using Excel or Python to support strategic decision-making.
- Designed and produced over 10 informative infographics based on data analysis results, collaborated with the communication and publication team to ensure consistency and effectiveness in media content.

AWARDS

- **3rd Place** – LIKMI, Applied Technology Business Category, *Yogyakarta State University* *2023*
  Project: "FO-Shion (Find Your Shade Cushion): A Spark AR Studio-Based Solution for Choosing the Right Cushion Shade for Skin Tone".
- **Finalist** – TrackAML Hackathon *PPATK* *2023*
  Project: "A Combined Fraud Detection and Ensemble Learning System for AML and Terrorism Indicators in Anomaly Data Analysis".
- **Finalist** – Abdidaya Ormawa, PPK Ormawa, Ministry of Education, Culture, Research, and Technology *2023*
  Project: Community service to build a climate-resilient village through agroforestry, biogas, biopore infiltration systems, and MSME empowerment using agroforestry products like eco-printing.

ADDITIONAL

Technical Skills: Python, SQL, R, MATLAB,
Machine Learning, Deep Learning, Scraping, Flask API, RESTful API, Streamlit, AWS.
Docker, GitHub/Git, Apache Kafka, Apache Airflow.
JavaScript (React, Node, Next), Typescript, HTML, CSS (Tailwind).
Data Visualization, Power BI, Google Looker Studio, Microsoft Office.
Languages: Native in Indonesian; English.