RESTU ANGGORO KASIH

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Bachelor's degree in Mathematics with a strong foundation in data analysis, machine learning, and AI implementation. Experienced in managing projects involving data preprocessing, model development, hyperparameter tuning, performance evaluation, and requirement analysis. Proficient in statistical methods and programming, with a strong interest in applying data-driven approaches to problem-solving.

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.
- Entered more than 300 data entries from PDF to Excel and performed typo checks.
- Developed maps in Roblox games using Roblox Studio and Lua programming language.
- Conducted validity testing (loading factor ≥ 0.7) and reliability testing (Cronbach's Alpha ≥ 0.7), and verified that $\sqrt{\text{AVE}}$ on the diagonal exceeds inter-construct correlations in the corresponding row/column.

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).

Customer Segmentation Using Birch Clustering
- Built a BIRCH model to segment 2,000+ customers based on purchasing behavior and demographics.
- Optimized clusters using the Elbow Method and improved performance with feature selection, PCA, normalization, and data cleaning, achieving Silhouette Score 0.695 and Davies-Bouldin Index 0.440.
- Derived actionable insights by analyzing spending behavior, identifying 3 core customer segments, and informing marketing strategies to boost campaign effectiveness.

Scraping-Based Data Collection and Classification
- Implemented a web scraping system using Google Play Scraper and BeautifulSoup to collect 4,000+ user reviews, applying text preprocessing (regex, tokenization, stopword removal, stemming, slang normalization).

- Visualized sentiment trends with WordCloud and Seaborn, identifying 3 dominant sentiment categories influencing model interpretation.
- Performed sentiment classification with multiple ML models, applied SMOTE for class imbalance, tuned hyperparameters, and achieved 96.92% accuracy with SVM.

Bank Fraud Transaction
- Conducted EDA and feature engineering on 2,512 transactions (Jan 2023–Jan 2024), 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.

Credit Card Report Dashboard (MySkill Course Project)
- Developed dashboard using Google Looker Studio for credit card performance metrics visualization
- Analyzed and emerged key data insights from 3 core business areas (transaction patterns, delinquent account risk profiles, and revenue performance) and 3 key segments (Customer Demographics, Revenue Profile, and Risk Profile) to support strategic business decisions.

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 more than 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, JavaScript, HTML/CSS, Machine Learning, Deep Learning, Data Visualization, Web Scraping, Flask API, RESTful API, AWS, React JS, Node JS, Big Data, Power BI, Google Looker Studio, Apache Kafka, Apache Airflow, Microsoft Office.
Languages: Native in Indonesian; Conversational Proficiency in English.