Amri Rasyidi

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Summary

Bachelor of Science in Geodesy and Geomatics Engineering with a strong passion for spatial science and data science. With over 5 years of experience in the data industry, including 2 years dedicated to data science. Shows Commitment to continuous learning and growth, by maintaining a blog documenting my data science journey and insights into life. Possess leadership experience and actively volunteer to teach data science to others, demonstrating a commitment to knowledge sharing and community engagement.

Skills and Stack

- **Machine Learning, Deep Learning, MLOps:** PyTorch, YOLO, XGBoost, MLFlow, Optuna, DVC , scikit-learn, statsmodel , TensorFlow, Darts
- **Data Science:** VSCode, GeoPandas, Apache-Sedona, polars, ydata-profiling, duckdb, BigQuery SQL, ArcGIS Pro , Neo4j, Cypher
- **Deployment:** Git, GitHub, lazygit, DagsHub , Gradio , HuggingFace, Azure, AWS
- **Relevant coursework:** computer vision (image classification, object detection), spatial analysis, time series forecasting, clustering, classification
- **Languages:** Bahasa Indonesia (Native), English (CEFR Level C1/IELTS 7.5).

Professional Experience

ESRI Indonesia (GIS Software & Services) — Jakarta, Indonesia

Data Scientist — *January 2023 – present*

Esri Indonesia provides GIS solutions and services to various industries in Indonesia, including local and national government, natural resources, utilities, transportation, telecommunications, and commercial.

- **Palm Tree Counting:** Led a palm tree counting project, overseeing data labeling of over 7000 data points on drone imageries, consulting with the reporting, and utilizing ArcGIS Pro for data preparation. Trained a deep learning model and managed performance analysis, resulting in an exceptional 95% mean Average Precision (mAP)
- **Road Damage Detection:** created a data engineering pipeline to convert ∼16k raw images and labels data from multiple sources to ready-to-train data. Trained a deep learning model using YOLOv8 and achieved a precision-recall score of 0.635 across all 4 classes.
- **GIS-Based Market Development:** collaborated with the solution team to develop a dashboard able to showcase current market presence and potential leads. Created a custom data processing pipeline capable of handling 193 million records, reducing manual process time by 72%. Applied a statistical method to classify ∼300 top priority leads out of 4000 prospects
- **PM2.5 Forecasting:** developed a deep learning time-series forecasting pipeline to forecast the next 48 hours of PM2.5 trends. Designed >80 experiment combinations and used MLflow and Dagshub to monitor the result. The best model achieved RMSE of ∼7.14.

Zenius Education (Ed-Tech) — Jakarta, Indonesia

Business Intelligence Analyst — *December 2021 - July 2022*

Zenius is a well-known ed-tech company pioneer focused on increasing thinking capacity and building foundational thinking for junior and senior high school student to help them excel in their school.

- **Workflow management:** structured a system to increase workflow transparency and accountability. Increased the ability to manage and monitor ad hoc and internal tasks/projects from 0 to 16+ tasks/projects weekly.
- **Dashboard:** created 3 dashboards with Google Data Studio for growth, finance, and content teams with over 50 metrics ranging from operational to C-level granularity.

Gojek (Q-commerce and Financial Services) — Jakarta, Indonesia

Junior Risk Data Analyst ⇒ Risk Data Analyst — *April 2019 - December 2021*

GoTo's ecosystem comprises of on-demand transport, e-commerce, food, and grocery delivery, logistics and fulfillment, and financial services through the Gojek, Tokopedia and GoTo Financial platforms.

- **Fraud analysis:** analyzed up to 1000 GPS movements daily to determine fraudulent patterns for constructing fraud rules of fourwheels and two-wheel platforms.
- **Rule deployment:** prevented new modus operandi from exploiting a GPS related-loophole in the production apps. Fraudsters abused this loophole for financial gain and reputation hijack. Reduced the number of case significantly from 400 to 10 cases daily, with a false positive rate under 1% within a month.
- **Rule enhancement:** analyzed the hypothesis made fraud my team then enhanced the rule by applying a more sophisticated method of fraud identification (relational graph logic) to detect the convoluted device connection/relation. Increased the detection rate by 50%.

Project

- **Palm Tree Detection using PyTorch Mask R-CNN and Drone Imagery:** developed a novel application utilizing PyTorch Mask R-CNN framework to accurately identify palm trees in aerial imagery captured by drones. Implemented pre-processing techniques for drone imagery and fine-tuned the Mask R-CNN model to achieve robust performance.
- **Book Recommendation System:** built a local web app to give users a book recommendation based on collaborative filtering logic. Also created a simple search engine to ensure users are asking for the correct book to be recommended.
- **MIT IDSS Course - Hackaton:** the objective of this problem is to understand which parameters play an important role in swaying passenger feedback towards a positive scale. Created logistic regression, XGBoost, and Deep learning model resulting in accuracy above 92%.
- **JDVF - Tableau Dashboard:** this dashboard provides the government, NGO, and researcher among many other stakeholders a start to make data-driven decisions and policy-making regarding flood mitigation in West Java. [Tableau Public]

Achievement

- **ESRI ArcGIS Pro Associate:** proof of experience in applying ArcGIS concepts and processes to workflows. Demonstrated proficiency using ArcGIS to manage, analyze, and manipulate geospatial data. [Certificate]
- **Neo4j Certified Professional:** official professional certification from Neo4j. [Certificate]
- **Panelist - ASEAN Geospatial Challenge:** a national level competition on geospatial solution and innovation. Involved as a panel in evaluating top 10 submissions. [Certificate]

Education

MIT IDSS: Data Science and Machine Learning — Remote
An online professional course taught by the MIT faculty — *August - November 2022*
Topic covered: statistics, unsupervised and supervised learning, hypothesis testing, deep learning, recommendation system, network and graphical model, and predictive analysis.

Institut Teknologi Bandung — Bandung, Indonesia
B.Sc in Geodesy and Geomatics Engineering, GPA 3.21/4.00. — *July 2014 - October 2018*
Topic covered includes: calculus, statistics, GIS, satellite geodesy, remote sensing, spatial database, cartography.

Leadership/Voluntary Experience

Yayasan Anak Bangsa Bisa (YABB) — Jakarta, Indonesia
Mentor/Instructor - Generasi Gigih — *July - December 2021*
Yayasan Anak Bangsa Bisa (YABB) is a non-profit organization founded by Gojek, a catalyst that enables resilient change makers to solve pressing challenges and build sustainable communities. Generasi Gigih programme focuses on generating tech-talent by conducting an intensive boot camp to prepare fresh graduates for the tech industry.

- **Designed, created, and lectured:** data analysis lecture materials (Python and SQL for data analysis).
- **Mentorship:** guide and mentor the participants during their internship. Ensured the participants gained the most during their internship while maintaining the focus on the projects they were working on.

Ikatan Mahasiswa Geodesi ITB (IMG-ITB) — Bandung, Indonesia
Chairman of IMG-ITB (Executive Student Council) — *August 2017 – March 2018*
Ikatan Mahasiswa Geodesi ITB (IMG-ITB) is a profession-based student association.

- **Visioning:** designed a blueprint as the north star metrics of the association. Mainly focus on character and mindset development in a professional manner and making a concrete social impact.
- **Executive function:** managed a council consisting of 5 ministries and 15 departments to maintain and develop the student association.

Miscellaneous

- **Topic:** education, environment, game industry, movie, leisure.
- **Book:** history, sociology, biography, religion, psychology.
- **Activity:** SCUBA diving, hiking, gym, PC game, writing.