

Skills and Stack

- **Machine Learning, Deep Learning, MLOps:** PyTorch, YOLO, XGBoost, MLflow, Optuna, DVC
- **Data Science:** VSCode, GeoPandas, Apache-Sedona, polars, ydata-profiling, duckdb, BigQuery SQL, ArcGIS Pro
- **Deployment:** Git, GitHub, lazygit, DagsHub
- **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).

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 include: calculus, statistics, GIS, satellite geodesy, remote sensing, spatial database, cartography.

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.

- **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

- **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. [\[Certificate\]](#)

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.