

Feryadi Yulius

UNDERGRADUATED DATA SCIENCE STUDENT

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Summary

Data Science undergraduate student with hands-on experience teaching mathematics and programming through private tutoring and university-level tutorial assistance. Skilled in delivering clear explanations, adapting lessons to diverse student needs, and strengthening logical and computational thinking. Proficient in Python, fluent in English and Bahasa Indonesia, and highly motivated to support students' learning as a part-time Math and Coding teacher.

Professional Experience

Researcher Intern – Badan Riset dan Inovasi Nasional (BRIN)

June 2025 – August 2025

Conducted research activities including data processing, analysis, and supporting experimental or computational research under institutional supervision.

Others Experience

Part-time Programing Teacher – Timedoor Academy Branch Bandar Lampung

January 2026 – Now

Provided part-time offline instruction in programming logic and coding for students aged 5–18 years, delivering age-appropriate lessons that develop computational thinking, problem-solving skills, and fundamental programming concepts through hands-on activities and guided practice. (AI, Coding, IoT, Robotic)

Master Teacher – Ruangguru Branch Bandar Lampung

Mei 2026 – July 2026

Taught mathematics for CPNS preparation, focusing on quantitative reasoning, problem-solving strategies, and practice-based learning to help students improve their test performance.

Part-time Teacher – Bimbel Ruang Juara

November 2025 – January 2026

Provided one-on-one tutoring in basic literacy and numeracy for early learners, emphasizing personalized teaching methods and the development of strong foundational skills.

Tutorial and Practicum Assistant – Sumatera Institute of Technology

2023 – 2026

Serve as a tutorial and practicum assistant for undergraduate-level courses, responsible for academic mentoring, practicum supervision, grading, and student assessment.

- Discrete Mathematics Tutorial Assistant
- Timeseries Analysis Practicum Assistant
- Optimization Theory Tutorial Assistant
- Multivariate Analysis Tutorial Assistant
- Data Mining Practicum Assistant
- Statistical for Data Science Practicum Assistant
- Functional Oriented Programing Grader
- Programming Algorithm Practicum Assistant
- Basic Math Tutorial Assistant

January 2026 – June 2026
January 2026 – June 2026
August 2025 – December 2025
August 2025 – December 2025
August 2025 – December 2025
January 2025 – June 2025
January 2025 – June 2025
September 2024 – December 2024
September 2023 – January 2025

Exam Proctor & Examination Room Coordinator – Lembaga Tahap Persiapan Bersama ITERA

November 2023 – Mei 2025

Supervised examinations to ensure academic integrity and orderly execution, while coordinating examination room logistics, attendance, and compliance with examination procedures

Education

Data Science (S-1) | Sumatera Institute of Technology
Oktober 2026

September 2022 –

- CGPA: 3.52/4.00

Others Activities

Head of Data Center - PIK-R Sejahtera ITERA
Aspirations Comision Head - HMSD Adyatama ITERA
Vice Head of Data Center - DUTA ITERA 2024

January 2023 – November 2024
January 2024 – December 2025
May 2024 – November 2024

Published Paper & Intellectual Property Rights

PlanktoScan – Computer Program (BRIN) 2025
Implementasi Ekosistem Hadoop untuk Analisis Segmentasi Pelanggan E-commerce di Pulau Sumatera 2025
Metode Seleksi Variabel dalam Pemodelan Regresi Linear Data Curah Hujan Provinsi Lampung 2024

Data Science Project

Evaluation Faster-RCNN & YoLo for Belitung Coastal Waters

Now

Conducted a comparative evaluation of Faster R-CNN and YOLO for object detection on coastal water imagery. Developed an end-to-end pipeline including data preprocessing, augmentation, training, fine-tuning, and performance evaluation using mAP, precision, recall, and F1-score. Analyzed the trade-off between accuracy and inference speed to identify the most suitable model for real-world deployment.

Queue System Analysis for Car Refueling Lanes (M/M/1 Model)

November 2025

Conducted a quantitative study of vehicle queues at gas stations near Institut Teknologi Sumatera using queuing theory (M/M/1 and M/M/s). Measured arrival and service rates, evaluated system performance, and recommended server adjustments to reduce congestion.

Unsupervised LinkedIn Company Profile Embedding using LSTM Autoencoder for Similarity Search

November 2025

Developed an LSTM Autoencoder to generate text embeddings from company profiles (about & description) for similarity search. Trained the model in an unsupervised manner, evaluated via similarity analysis and embedding visualization. Demonstrated ability to capture semantic similarities among companies, supporting text-based search and recommendation systems.

Phytoplankton Classification from Belitung Coastal Waters using Deep Learning

August 2025

Processed and cleaned 236 images across 26 phytoplankton classes from Belitung coastal waters. Expanded the dataset to over 10,000 images through 9 augmentation techniques to address class imbalance. Trained and evaluated CNN models across 13 architecture variants including ResNet, DenseNet, EfficientNet, MobileNet, InceptionV3, and ConvNeXt to improve classification performance.

Automatic Phytoplankton Classification Android Application

August 2025

Developed an Android-based mobile application for real-time phytoplankton classification. Implemented using Kotlin and Android SDK with TensorFlow Lite integration for on-device inference. Configured app compatibility with Min SDK 24 (Android 7.0) up to Target SDK 36 (Android 16). Integrated Firebase for database management, enabling scalable storage and retrieval of classification results.

Outfit Recommendation Chatbot using NVIDIA

June 2025

Developed a personalized outfit recommendation system using Retrieval-Augmented Generation (RAG) architecture powered by NVIDIA LLM (Llama-3.1 Nemotron Nano 8B). Integrated FAISS for fast similarity search on vectorized instruction-following dataset. Applied prompt engineering to fine-tune responses in the style of a fashion stylist. The system provides context-aware, text-based outfit suggestions with potential for future multimodal expansion and real-world deployment.

Infographic: Exploring Rice Production in Indonesia

April 2025

Behind Indonesia's glittering achievement as one of the world's largest rice producers lies a paradox that challenges national food security. The infographic "From Fields to Distribution" reveals a stark contrast between impressive production milestones and the unequal realities of distribution. An infographic submitted to the 2025 Gammafest IPB Statistical Visualization Competition.

Toy Store KPI Analysis with PowerBI Dashboard

March 2025

As one of the most dynamic sectors in retail, the toy industry is undergoing rapid changes driven by product innovation and shifting consumer preferences. "Maven Toys," as one of the key players in this industry, must have a deep understanding of its sales performance in order to compete effectively. In this context, the use of BI dashboards is becoming increasingly important to provide data-driven insights to management. Dashboards not only present information visually but also enable in-depth interactive analysis.

Plankton Classification using ResNet

February 2025

Plankton classification model using Deep Learning based on the ResNet-101 architecture pre-trained on ImageNet, with fine-tuning applied to a combined dataset of 3,144 images spanning 19 marine plankton species (sourced from internet images, lecture materials, and the WHOI Plankton Dataset). The model was modified by replacing the final fully connected layer to output 19 classes, trained using the Adam optimizer (learning rate = 0.001) with a StepLR scheduler (reducing the learning rate every 7 epochs), and achieved accuracies of 99.55% (training), 88.17% (validation), and 99.15% (testing).

Spices Detection With Streamlit

November 2024

Spice Detection is an AI-powered online platform designed to identify 31 varieties of Indonesian spices through image analysis. Developed using Python and implemented with the Streamlit framework, this platform boasts a prediction accuracy of up to 83% and aims to simplify the identification and enrich public knowledge of Indonesia's diverse spices.

Know Your Batik Website With Streamlit

October 2024

Know Your Batik is a website that allows users to detect types of batik based on uploaded images or photos. To address the lack of public understanding about the variety of batik and to prevent cultural claims by other countries, the Know Your Batik website serves as an innovative solution. This website is designed to help users recognize and understand different types of batik through image processing technology.

Journal Mancing With Streamlit

November 2023

A final project for a Programming Algorithms course involved creating a fishing log app using Python libraries like Streamlit, Sqlite3, and Pandas. The application, which has been deployed on the Streamlit community and stored in a GitHub repository, functions similarly to a note-taking app on mobile devices but is tailored for fishing activities. This specialized app offers various features to aid anglers in recording and monitoring their fishing endeavors, aiming to enhance their fishing experiences.