



# Sefvia Lie

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## Education

### Universitas Gadjah Mada

Bachelor of Engineering, Biomedical Engineering (GPA: 3.73/4.00)

Aug 2021 – Aug 2025

Yogyakarta, Indonesia

- Best Biomedical Engineering Graduate 2025
- English Proficiency Score: 593/677 (FEB UGM, Jul 2025)

## Projects

### Banking Transaction Analytics Pipeline | Python, Airflow, dbt, BigQuery, Terraform, Docker, GCP

Dec 2025 – Jan 2026

- Designed and implemented an **end-to-end batch data pipeline** processing **62M+** banking transactions from raw ingestion to analytics-ready dashboards
- Orchestrated automated ETL workflows using **Apache Airflow**, transforming raw data into dimensional models with **dbt** in **BigQuery**
- Deployed scalable cloud infrastructure on **Google Cloud Platform** using **Terraform** (IaC) with **Docker** containerization
- Implemented **CI/CD pipelines** and comprehensive **data quality testing** to ensure production reliability
- Built interactive analytics dashboards in **Looker Studio** enabling real-time business insights

### Autonomous Surgical Robot Control | Python, TensorFlow, Deep Learning, Imitation Learning

Feb 2025 – Jul 2025

- Developed and optimized **machine learning models** for surgical robotic automation using imitation learning
- Published and presented research at **IEEE ICITEE 2025**, Bangkok, Thailand

### Tuberculosis Classification Web App | TensorFlow, FastAPI, Docker, Vercel

Oct 2024 – Nov 2024

- Built and deployed a **deep learning model and REST API** for automated TB image classification
- Designed end-to-end ML pipeline from model training to production deployment on Vercel

### Smart Infant Incubator (Inkubi) | IoT, Sensors, Python, Data Analysis

Mar 2024 – Nov 2024

- Engineered smart incubator prototype integrating **IoT sensors** for real-time health monitoring
- Applied system modeling, experimental testing, and data analysis to optimize performance

## Experience

### Lecturer & Tutorial Assistant

Aug 2022 – Jul 2025

Universitas Gadjah Mada

Yogyakarta, Indonesia

- Supported **9+ STEM courses** for over **600 students** in signal analysis, physics, and linear algebra
- Developed structured teaching materials and data-driven content for complex technical concepts
- Facilitated group learning sessions, encouraging critical thinking and problem-solving approaches

### Neuroimaging & Signal Processing Intern

Jan 2024 – Feb 2024

C-Tech Labs Edwar Technology

Tangerang, Indonesia

- Processed and analyzed **large-scale neuroimaging datasets** using MATLAB and Excel for ECVT research
- Developed repeatable data analysis workflows for multi-source signal data processing
- Presented research findings and data interpretations to multidisciplinary technical teams

## Certifications & Training

### Professional Data Engineer in Python (DataCamp, Jan 2026) | Data Engineer (DataCamp, Jan 2026)

Data Engineer Associate (DataCamp, Dec 2025) | SQL Associate (DataCamp, Dec 2025) | Data Analyst Associate (DataCamp, Nov 2025)

Data Engineering Zoomcamp (DataTalksClub, Dec 2025 – Jan 2026)

## Technical Skills

**Data Engineering:** Apache Airflow, dbt, ETL/ELT Pipelines, Data Modeling, Data Quality Testing, Dimensional Modeling  
**Cloud & Infrastructure:** Google Cloud Platform (GCP), BigQuery, Terraform (IaC), Docker, CI/CD

**Programming:** Python, SQL (PostgreSQL, BigQuery), C++, Pandas, NumPy

**Machine Learning:** TensorFlow, Deep Learning, Image Classification, scikit-learn

**Tools:** Git, GitHub, Looker Studio, VS Code, MATLAB, FastAPI

## Leadership & Activities

### Liaison Officer | Summer Course, Faculty of Dentistry UGM

Jul 2023 – Aug 2023

- Coordinated communication among **90 international students** and **10 ASEAN faculties**