

# TULUS SETIAWAN

+6281213679316 | tulus.setiawan01@sci.ui.ac.id | [Linkedin](#) | [Github](#)

A person with a robust background in mathematics and a keen interest in data science, machine learning, deep learning, finance, and artificial intelligence. Known for resilience, perseverance, and a strong sense of responsibility. Committed to lifelong learning, personal and professional growth, with an unwavering determination to succeed in all endeavors.

## EDUCATION

### Bachelor's Degree - Mathematics

Sep 2020 - Jul 2024 (Expected)

Universitas Indonesia, Faculty of Mathematics and Natural Science

- Minor: Data Science
- GPA: 3.40 / 4.00

### Study Independent - Machine Learning Cohort

Feb 2023 - Jul 2023

Bangkit Academy led by Google, GoTo, & Traveloka – Jakarta

- Accomplished completion of courses in Data Analytics, Python Automation, Machine Learning, Deep Learning, Data, and Deployment.
- Collaborated with a multidisciplinary team, including Cloud Computing, Mobile Development, and Machine Learning divisions, on a Capstone Project.
- Developed a Machine Learning model for implementation into an Android application as part of the project.

## WORK EXPERIENCES

### Laboratory Assistant - Department of Mathematics

Mar 2023 – Jul 2023

Universitas Indonesia – Depok

Laboratory Assistant of Data Science and Numerical Differential Equations Courses

- Served as an instructor, delivering practicum, mentoring students, and fostering skill development in the field.
- Developed learning modules for hands-on practice in data science, machine learning, and mathematical programming in Numerical Differential Equations.
- Administered and assessed practicum projects to evaluate student learning.

## PROJECTS

### TeethCare – Capstone Project, Bangkit Academy ([link](#))

2023

- Constructed a Computer Vision model for image classification, utilizing the Efficientnet V2M model architecture. This model was specifically trained to classify dental diseases in this project, achieving an AUC score of 88.98%.

### Sentiment Analysis and Topic Detection – Web Mining, Universitas Indonesia ([link](#))

2023

- Constructed NLP models for Sentiment Analysis and Topic Detection, specifically analyzing tweets about ChatGPT from March 2023.
- Developed a Sentiment Analysis model using the BERT Pretrained model, achieving an accuracy score of 88% on tweets about the 2014 Presidential Election.

### Gene Expression – Data Science Genome, Universitas Indonesia ([link](#))

2023

- Implemented K-means and Hierarchical clustering models for brain cancer gene expression analysis.
- Constructed Logistic Regression and XGBoost Classifier models for classifying brain cancer gene expression.
- Utilized differential expression and statistical methods to identify genes with altered expression levels in breast cancer gene expression.

### HealthBoard – Data Analytics and Visualization, Healthkathon BPJS Kesehatan ([link](#))

2023

- Pioneered the development of informative and interactive dashboards, leveraging geographic data to foster a culture of data-driven decision-making.
- Created dashboards to visualize demographic information, facility preferences, and health issue distribution of BPJS Kesehatan participants.

#### **Inefficient Claim Detection** – *Machine Learning, Healthkathon BPJS Kesehatan* ([link](#)) 2022

- Implemented an XGBoost model to classify claim inefficiencies among BPJS Kesehatan participants.
- The model demonstrated high performance with an accuracy score of 99.4% and a precision score of 95.2%.

#### **E-commerce System Database** – *Database, Universitas Indonesia* ([link](#)) 2022

- Developed an e-commerce database to aid management decisions.
- Utilizing SQLite software and Google Colab's sqlite3 module for data wrangling, database creation, and data analysis.

## **OTHER EXPERIENCES**

### **Vice Head of Logistic Division** Jun 2022 - Oct 2022

#### *Pengenalan Departemen Matematika (PDM) 2022*

- Liaise with the event division for essential requirements like venues and supplies, ensuring their provision for events.
- Collaborate with the financial division on the fiscal system for procuring necessary goods during events.
- Coordinate with the secretarial division on official communications for securing venues during event series.

### **Staff of Career Development and Entrepreneurship Department** Mar 2021 - Feb 2022

#### *Himpunan Mahasiswa Departemen Matematika FMIPA UI*

- Engage in initiatives facilitated by the Career Development and Entrepreneur Department for Mathematics students, aimed at enhancing post-academic life. These initiatives encompass practical interview sessions, entrepreneurial courses, entrepreneurial projects including managing an Instagram feed, and webinars and workshops pertinent to careers in the field of Mathematics.
- Collaborate with other staff by carrying out different tasks in each project.

## **SKILLS**

**Soft Skills:** Leadership, Teamwork, Communication, and Strategy.

**Hard Skills:** Python (Programming Language), Ms. Office (Excel, Word, Powerpoint), SQL, Mathematics, Machine Learning, Deep Learning, Data Science, and Data Analysis.

## **LICENSES & CERTIFICATIONS**

- Bangkit Academy, Specializing in Machine Learning ([link](#)) 2023
- TensorFlow Developer Certificate ([link](#)) 2023
- DeepLearning.AI TensorFlow Developer Specialization ([link](#)) 2023
- Google Data Analytics Specialization ([link](#)) 2023
- TensorFlow: Data and Deployment Specialization ([link](#)) 2023
- Machine Learning Specialization ([link](#)) 2023
- Mathematics for Machine Learning Specialization ([link](#)) 2023

## **HONORS & AWARDS**

**Top 45, Final Stage of Healthkathon 2023 - Data Analytics dan Visualization Category** 2023  
*BPJS Kesehatan*

**3<sup>rd</sup> Winner of Healthkathon 2022 - Machine Learning Category** 2022  
*BPJS Kesehatan*