TULUS SETIAWAN

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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 - Aug 2024 (Expected)

Universitas Indonesia, Faculty of Mathematics and Natural Science

- Related Subjects: Data Science, Computational Intelligence, Bioinformatics and Artificial Intelligence, Web Mining, Mathematical Programming, Mathematical Modelling, and Entrepreneurship.
- Bachelor's thesis: Comparative Study of Sentiment Analysis Performance of Indonesian Language Based on Large Language Model BERT and GPT
- GPA: 3.43 / 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

Planning Analyst Intern – Prime Product Supply Chain   Jan 2024 – Jul 2024

Trakindo – Jakarta Selatan

- Gained expertise in analyzing and optimizing business processes and data management within the primary product supply chain division.
- Developed and implemented VBA macros to automate data processing tasks in Microsoft Excel, enhancing efficiency for demand planners and supply planners.
- Developed a VBA macro program that automated data processing tasks, resulting in up to a 90% efficiency improvement over the manual process.

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 15% of Healthkathon 2023 - Data Analytics dan Visualization Category   2023
BPJS Kesehatan

3rd Winner of Healthkathon 2022 - Machine Learning Category   2022
BPJS Kesehatan