ABYOSO HAPSORO NURHADI

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EDUCATION

B.Sc. in Mathematics GPA: 3.42, High Merit Jul 2016 – Jul 2022	**UNIVERSITY OF INDONESIA (UI)** Thesis: *COVID-19 Degree of Severity Classification with Model Selection supported by Conformal Reliability*
Applied Data Science Mar 2022 – Mar 2023	**WORLDQUANT UNIVERSITY** Eight end-to-end applied Data Science projects
Machine Learning GPA: 4.00, Distinguished Jan 2022 – Jul 2022	**BANGKIT ACADEMY** Capstone: *Prototype Mobile Application for Post-Hospital Discharge Suicide Risk Prevention*

WORK EXPERIENCE

Research and Development Engineer Full Time, Remote Oct 2024 – Present	**WAKO GMBH** • Researching and developing scalable mathematical algorithms for 3D modeling applications, leveraging concepts of Calculus and Geometry • Implementing and maintaining REST API integrations to transform meshes • Optimizing mesh processing workflows utilizing Azure DevOps services
Data Science Engineer Full Time, Remote Dec 2023 – Jun 2024 (7 months)	**KITESENSE** • Created multiple ETL processes to extract data from AWS S3 bucket and other sources using techniques such as Retrieval-Augmented Generation (RAG) • Reduced LLM costs on some of the pipeline up to 60% while improving results • Core content provider for a student product with involvement in user testing • Supported content operations in Mathematics, Science, English and Chinese
Data Engineer Full Time, Remote Sep 2022 – Sep 2023 (1 year 1 month)	**EDGEPROP SINGAPORE** • Core member of data team, founding member of AI team, supporting member of listings team, and supporting member of new launches team • Delivered analytical solution and met internal stakeholders' requirement and specifications. Also discussed technical implementations with product side • Monitored automation jobs, ensuring data accuracy is reflected in frontend • Developed Named Entity Recognition and Intent Classification models for chatbot • Implemented ETL improvement for API crawling by removing redundant steps and optimizing memory usage, leading to 77% reduction in processing time
Machine Learning Instructor Part Time, Remote Jan 2023 – Jul 2023 (7 months)	**BANGKIT ACADEMY** • Recognized as a Rising Star Contributor, given for showing the most significant improvement during the program • Customized teaching materials resulting in 91.53% student satisfaction rate surpassing the average of 90.1%, enhancing the overall learning experience • Assisted students in preparing for the TensorFlow Developer Certification
Head of Laboratory Assistants Part Time, Onsite Jan 2019 – Jan 2020 (1 year 1 month)	**UI, DEPARTMENT OF MATHEMATICS** • Effectively led a team of 9 computation and 4 statistics lab assistants throughout both terms of 2019, ensuring smooth operation and coordination • Provided mentorship to 4 computation and 2 statistics lab assistant interns • Designed laboratory sessions curricula to supplement regular curricula • Efficiently managed timetables and coordinated lab usage for various activities, optimizing resource allocation and ensuring a seamless schedule

RESEARCH EXPERIENCE

Research Assistant Part Time, Hybrid Apr 2019 – Jul 2019	**UNIVERSITY OF INDONESIA (UI)** Provided assistance to a PhD candidate majoring Biomedical Science by utilizing interpretable Machine Learning techniques for research on Schizophrenia disorder

SCHOLARSHIP

Machine Learning Foundations Sep 2022 – Oct 2022	**DIGITAL TALENT SCHOLARSHIP / AMAZON WEB SERVICES ACADEMY** Acquired practical skills in AWS Machine Learning utilizing various services such as Amazon SageMaker, Amazon Forecast, Amazon Rekognition, and Amazon Lex

ACHIEVEMENT

3rd Winner National Scale Apr 2019	**IMERI UI, OPEN INNOVATION** Designed and implemented an early Schizophrenia factor determiner prototype using Python by syntactical analysis and speech semantics of human conversation
Finalist Faculty Scale Feb 2019 – Mar 2019	**FMIPA UI, MOST OUTSTANDING STUDENT SELECTION** Selected as one of two department representatives due to exceptional record. The faculty selection evaluates on categories like scientific article and English speech
1st Winner Multinational Scale Sep 2018	**ITB, MATHEMATICAL MODELING COMPETITION** Implemented a time series trend seasonal model using Python and R to for product sales estimation and conclusive evidence on the order of profitable products

PROJECT

REAL-TIME INDONESIAN TWEETS SENTIMENT ANALYTICS DASHBOARD *Nov 2021*
- 1 of 2 best milestone projects for an Analyzing Twitter's Tweets Data workshop made using Python and HTML
- Designed Flask application HTML output and hosted deployment on the web
- Compared many different classifiers and optimized best performing models achieving 77.02% accuracy

**ALGORITHM FOR PSYCHOSIS PREDICTION ON CLINICAL HIGH-RISK TEENAGER
GROUP USING SYNTACTICAL ANALYSIS AND SPEECH SEMANTICS** *Apr 2019*
- Implemented a 3D Convex Hull Classifier to classify highly descriptive verbose and non-verbose speech
- Achieved mean accuracy of 95.36% and mean precision of 93.93% with less than 0.02% cross validation error

**SENTIMENT ANALYSIS, TOPIC MODELING, AND OBSERVATION OF GEOGRAPHICAL
AND TIME ASPECTS OF @tokopediacare TWITTER ACCOUNT** *Dec 2018*
- Top performing Data Mining course final project using R and Microsoft Excel
- Modeled 35 unique topics and visualized 1417 unique locations
- Trained a traditional classifier to classify 308,411 positive and negative tweets with 54% accuracy using R

TRAINING

- Southeast Asia Machine Learning School *Jul 2019*
- Tokopedia Text Mining to Sentimental Analysis *Nov 2018*
- Data Science Indonesia Deep Dive into Data Analytics *Apr 2017 – May 2017*
- Pacmann Machine Learning for Beginners *Jan 2017 – Feb 2017*

ORGANIZATION

- Vice Person in Charge for Registration Division of Logika UI *Jun 2017 – Feb 2018*
- Staff for Knowledge Division of UI Mathematics Student Union *Mar 2017 – Feb 2018*
- Person in Charge for Essay Competition of UI Mathematics Student Olympiad *May 2017 – Nov 2017*
- Mentor of Freshman Student Creativity Program in Research *Aug 2017 – Oct 2017*

ADDITIONAL

Certifications: TensorFlow Developer, Oracle Machine Learning, Society of Actuaries Financial Mathematics