# Michael Geraldin Wijaya

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LinkedIn | GitHub | Portfolio

## EXPERIENCE

### Tutor Bina Nusantara University

*Bina Nusantara University* 09/2023 – 01/2024

- Conducted weekly study classes for Statistics and Linear Algebra, supporting students throughout one semester.
- Facilitated learning by providing explanations, answering questions, and offering guidance to ensure student success in these subjects.

### Project-Based Virtual Intern: Data Scientist – ID/X Partners x Rakamin Academy

*ID/X Partners, Jakarta, Indonesia* 08/2023 – 09/2023

- Finishing various task related with the activity of Data Scientist from ID/X Partners, such as Big Data Fundamental, Statistics & Data Analytics, and Machine Learning Implementation.

## EDUCATION

**Bina Nusantara University**
*Bachelor of Computer Science* | 2022–Present
Streaming: Intelligent System
Latest GPA: 3.94
Achievements:
- Awardee Widia Partial Scholarship BINUS University
- Awardee of Beasiswa Unggulan Kemendikbudristek 2023
- National Finalist ASEAN Data Science Explorers 2024 Competition
- Top 20 Finalist School of Computer Science Hackaton 2024 BINUS x Microsoft (AI4A)

**Senior High School 4 Palembang**
*Natural Science* | 2019–2022, Grade: 97.29
Achievements:
- 1st Place Winner of the National Independent Science Competition - Mathematics.
- A+ (Gold Medalist) in the Indonesian Science Competition 2022 - Mathematics.
- A+ (Gold Medalist) in the Indonesian Science Competition 2022 - Technology and Information.
- Gold Medalist in the 2022 National Numeracy Olympiad for High School Students.
- Gold Medalist in the National Student Science Competition - Mathematics.

## PROJECTS

### Plant Disease Detection

10/2024 – Present

- This plant disease detection system utilizes traditional methods like SVM and Random Forest combined with feature extraction techniques such as Hu Moments, Haralick textures, and Color histograms. Furthermore, it also uses pretrained CNN models such as ResNet and MobileNet.

### Patient's Condition Classification Using Drug Reviews

06/2024

- The project uses drug reviews with machine learning models such as Passive Aggressive Classifier, Random Forest, and XGBoost to predict patient conditions. It applies text processing techniques such as CountVectorizer, TFIDFVectorizer, and Word2Vec to analyze user reviews. The project provides visualizations of condition proportions and word clouds, and recommends the top three drugs for the condition.

### Personal Medical Chatbot with LLM RAG

06/2024

- Personal medical chatbot project using Large Language Models (LLM) and Retrieval Augmented Generation (RAG). The chatbot provides detailed answers by leveraging medical knowledge from PDF documents, employing LlamaCPP for LLM integration and llama_index for efficient document handling. This approach enhances natural language responses and enables advanced retrieval of health-related information.

### Simple Personal Chatbot

06/2024

- This simple personal chatbot project uses NLP techniques and neural networks to process user queries effectively. It employs TF-IDF and Word2Vec to enhance comprehension and responsiveness. Data preprocessing techniques like tokenization, punctuation removal, and stop word elimination help the chatbot learn from an intents.json dataset to categorize patterns and responses. TF-IDF evaluates word importance, while Word2Vec creates word vectors for better semantic understanding. Flask is used to develop API endpoints, enabling integration with various platforms.

### Ad Hoc Insights Consumer Goods

06/2024

- This project aimed to analyze consumer goods data to provide insights for management decisions. Using MySQL, I implemented concepts such as Joins, Subqueries, String, Numeric, and Date Functions, as well as Window Functions and Common Table Expressions (CTEs) for effective data manipulation. To visualize the findings, I used Tableau to create clear and informative data visualizations, and Canva for presentation creation.

### LibraLink: Smart Attendance with Book Recommendation 09/2023 – 12/2023

- LibraLink is an advanced attendance system integrated with a book recommendation feature, specifically designed for library environments. At its core lies a robust facial recognition-based attendance mechanism, powered by Convolutional Neural Networks (CNN). In addition to tracking attendance, the system offers a personalized book recommendation service, leveraging the K-Nearest Neighbous (KNN) algorithm to align with user preferences.

### Movie Recommender System 08/2023

- This ML project utilizes a Content-Based Recommender System for movies, using features like titles, genres, and posters to provide recommendations based on the chosen film. The system employs cosine similarity to gauge similarities between movies and is deployed using the Streamlit platform, enabling user-friendly interaction.

### Image Classification of Billionaires 08/2023

- Utilized OpenCV for face and eyes detection, performed data cleaning through OpenCV's face detection, and conducted feature engineering using wavelet transforms. Built models using SVM, logistic regression, and random forest, further refining them with GridSearchCV. Exported final model to a file and established a Python Flask server. Deployed the project on AWS EC2.

### Credit Risk Modelling 08/2023

- Utilized Logistic Regression to identify loan default risks from historical loan data. Conducted data preprocessing, feature engineering, and optimized model performance via ROC curve analysis. Gained insights into credit default risk factors, including loan duration, employment length, and payment history.

## CERTIFICATES

- **Building Transformer-Based Natural Language Processing Applications** | NVIDIA | 2024
- **ASEAN Data Science Explorers 2024 National Final Indonesia** | ASEAN Foundation | 2024
- **Supervised Machine Learning: Regression and Classification** | DeepLearning.AI | 2024
- **Oral Presentation** | International Conference on Computer Science and Computational Intelligence (ISSCSI) | 2024
- **Data Science and Machine Learning Fundamentals** | Corporate Finance Institute (CFI) | 2022
- **Machine Learning with Python** | IBM | 2022
- **Statistics Fundamentals** | Corporate Finance Institute (CFI) | 2022
- **Data Analysis using Python** | IBM | 2022
- **Python for Data Science** | IBM | 2022

## SKILLS

- Programming: Python, SQL, C, Java
- Data Visualization
- Machine Learning: Machine Learning Algorithms and Techniques
- Deep Learning: Tensorflow, Keras
- Natural Language Processing (NLP)
- MLflow
- Git/GitHub/DagsHub
- Flask
- Docker
- Google Cloud Platform (GCP) Products: BigQuery, Cloud Storage, Cloud Functions

*Languages:*

- Indonesian (Native)
- English (Intermediate)

## ORGANIZATIONS AND ACTIVITIES

- Data Science Club (DSC) and Ureeka BINUS University (2024 - Present)
- Badminton (2023 - Present) and Binusian Gaming (2022 –Present) BINUS University
- Tutor BINUS University (2023 – 2024)

## VOLUNTEERING

- Anti Bullying Educator - Christian Eunike Orphanage Foundation, Semarang, Central Java (11/2022)
- Patriotism Educator - Bethlehem Salvation Army Orphanage, Semarang, Central Java (06/2023)