# FREDERICK MALCOLM

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## ABOUT ME

I am an undergraduate student at Binus University with a GPA of 3.31, passionate about entrepreneurship, quantitative finance, and financial market. I focus on leveraging data-driven strategies, machine learning, deep learning and innovative thinking to solve complex problem in financial markets and businesses. With a strong entrepenurial mindset, I aim to build scalable, impactful products and research projects that bridge the gap between technology and finance

## EDUCATION

**Bina Nusantara Univerity** **2023 - Present**

- Bachelor of Computer Science (Expected Graduation: 2027)
- Cumulative GPA: 3.31/4.0

**Sekolah Global Indo Asia** **2020- 2023**

- High School Diploma - Science Major

## ORGANIZATIONS/VOLUNTEER

- **Bina Nusantara Computer Club - BNCC**

  Participated as a member, developing foundational programming skills and gaining a solid understanding of core programming concepts, with a specialization in C programming language.
- **Volunteer - Tangan Kasih Social Foundation**

  Volunteered to give a session about tolerance between people in society and collaborated with a team to distribute essential goods to the orphanage.
- **Volunteer - Mekar Lestari Orphanage**

  Volunteered to interview and teach children about tolerance among different religions and collaborated with a team to distribute essential goods to the orphanage.
- **Binus Basketball Club Member**

  Participated as a member in a basketball team
- **SSO Festa X Binus Basketball**

  Competed as part of the team and achieved 2$^{nd}$ place in SSO Festa X Binus Basketball event

## SKILLS

- Progamming language: Python, C
- Data Analysis & Visualization: Pandas, Numpy, Matplotlib
- Machine Learning & AI
- Tools & platform: GitHub, Vs Code, Jupyter Notebook

## LANGUAGE

- English (Fluent)
- Bahasa Indonesia (Native)
- Mandarin (Conversational)

## PROJECTS

**IndoMaem - University Project**

Indomaem is a platform that introduces traditional Indonesian cuisine to users. The platform allows users to explore dishes from different regions across indonesia. By selecting a specific area users can access detailed information about the local dishes and view the location to easily find where to try them.

**Brain Tumor Detection - University Project**

This project was done to develop an artificial intelligence model to classify brain tumor images as “No Tumor” or “Yes Tumor” using deep learning techniques. The system leverages CNN or Convolutional Neural Networks for image processing and classification, using publicly available brain tumor datasets

**WeatherZen - University Project**

WeatherZen is a real time weather forecast platform the provides users with accurate weather updates and forecasts. The platform uses a machine learning approach, random forest tree where it is trained on historical weather data to improve the forecast accuracy. I was tasked to evaluate the train model using MSE, MAE, r2 score, visualize the data and EDA, Implemented backend functionality to load the machine learning model and scaler for real time prediction.

**ExploreID - University Project**

ExploreID is a tourism platform designed to help users to discover destinations, plan itineraries, access personalized recommendations , search for a tour guide across Indonesia. The platform provides tailored suggestions, users testimonials, and a favourite places feature to enhance the travel experience and also including the information about available tour guide.

**Sentiment Analysis of Ethereum-Related Discussions on X (Twitter) and Its Correlation with Price Volatility - University Project**

This project analyzes social media discussions related to Ethereum on X (formerly twitter) to investigate the correlation between the public sentiment and etheruem price volatility. The study leverages NLP or Natural Language Processing techniques to classify sentiment and examines how sentiment trends related to short term price movements.

**Indonesia Stock Price Behavior in Banking and Energy Sectors: A Machine Learning Approach to Dividend Analysis - University Project**

This project investigates the behaviour of Indonesian stock prices in the banking and energy sector, focuing on the impact of dievidend events. Using machine learning techniques and model, the study analyzes historical price and dividend data to identify patterns and predict potentials returns around dividend dates.

**War and Market Impact Analysis - Personal Project**

Analyzes the impact of wars on global and Indonesian financial markets, by examining multiple instruments, including S&P500, Gold, Crude Oil, Swiss Franc, MDKA, and BRMS. The study evaluated market reactions over specific time window: 30 days before the event (D-30), the event day (D), 30 days after (D +30), and 180 days after (D+180). This study analyze on short term market corrections, long term trends, and sector specific responses, providing comprehensive assesment of market sensitivity to geopolitical events.