



DiFA

“Your personal Digital Financial Advisory for Mutual Funds”



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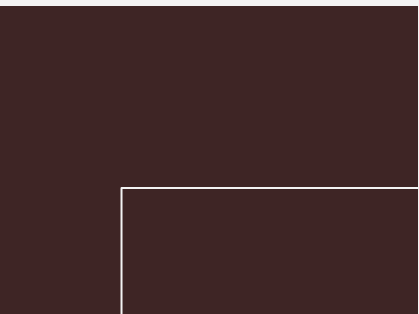
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Urban Planning



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Business Management

Our Team

We have our own strength and make
it work by helping each other!



We support people in Indonesia
for having **Mutual Funds** as our
investment for a better future.



Mission Statement

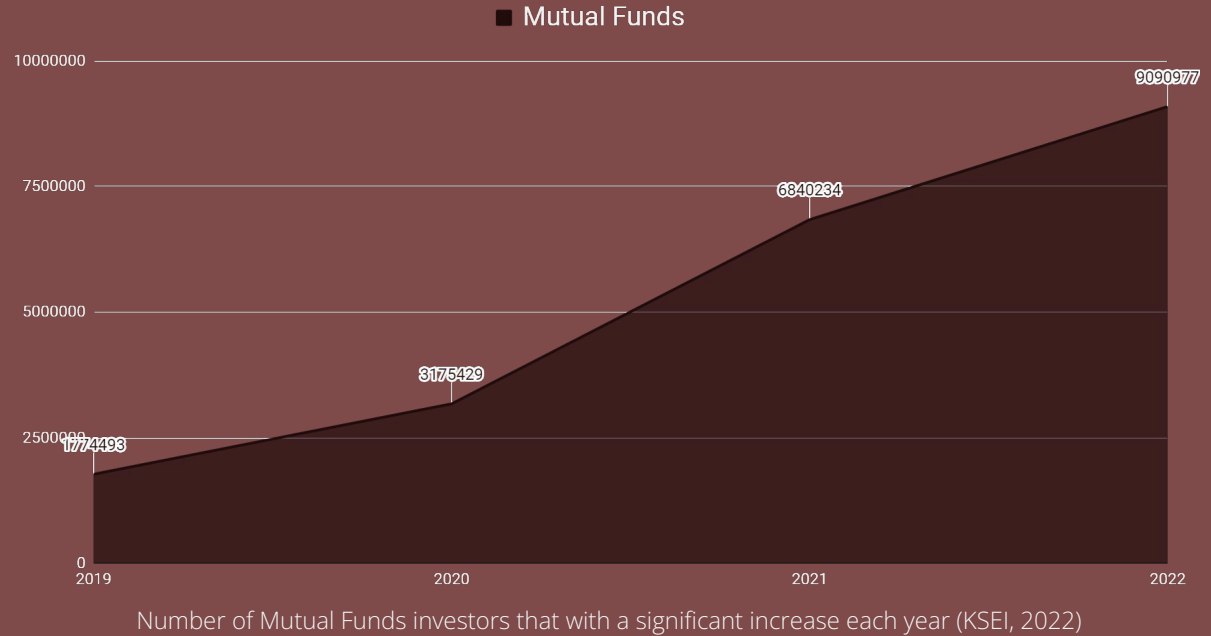
A low-angle, upward-looking photograph of several modern skyscrapers with glass facades. The image is overlaid with a semi-transparent dark maroon filter. A white rectangular frame is centered on the page, enclosing the text. The number '01' is large and white, positioned on the left side of the frame. To its right, the words 'Project' and 'Background' are stacked vertically in a smaller white font.

01 Project Background

Indonesia's financial condition

Increase demand and supply of finance by **increasing access to and usage of financial services**, broadening and improving the quality of financial market products and mobilizing long-term savings.

World Bank, 2022

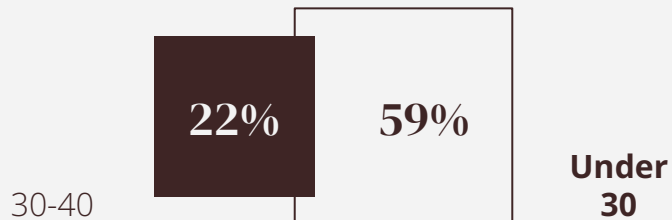


Mutual Funds Investors

Asset Holders (Gender)



Asset Holders (Age)



Average Annual Income per Investors (Rp)

38.25%

<10 M

48.92%

10M – 100M

12.83%

> 100M

Occupations

Students (28%)



Entrepreneurs (14%)

Employers (32%)



Others (26%)

Source Data: KSEI, 2022

Problems

The increasing number of investors, then it is important to support people and Indonesia Economic Prospects (IEP):

Accessibility for people

Efficiency of financial sector

Education for consumers

Solution

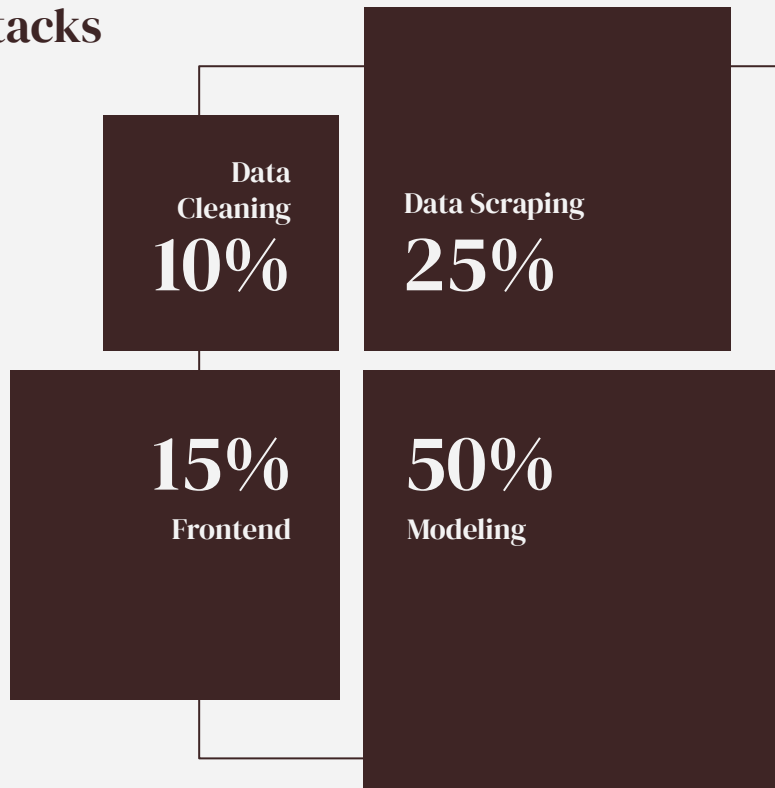
Digital Financial Advisory (*DiFA*) models trained from scratch to give the user risk profiling and to suggest the best Mutual Funds investment through online app!



DiFA Model

02

Technology Stacks



Project Management

Trello and Microsoft Excel, containing schedule for each work with PIC.

Data Scraping

Python, most data are from Bareksa. From texts converted to tuple, and transformed to dataframe..

Data Cleaning

Python, with packages pandas, numpy, scikit-learn, tensorflow and others

Modeling

Google Colaboratory, with the best result from Deep Learning Algorithm: RNN (LSTM)

Frontend

Using python, streamlit, and HuggingFace for building the application.

Timeline

1. Problem Analysis

Doing research to find the issues about Indonesia Financial Condition:

- Mutual Funds profiling analysis
- Creating questionnaires for profiling



2. Data Scraping

Scraping data from various sources such as: bibit.com, Bareksa, etc.



3. Data Cleaning

Cleaning data and preprocessing



4. Data Modeling

Model training after data preprocessing, testing various algorithms until decided to use **LSTM**, and evaluating models



5. Finalization

Creating an app (frontend) with HuggingFace, designing the app





03

Operating
Plan

Risk Profiles

High Risk

Investors tolerance for risk, portfolio volatility and investment losses is high or very high

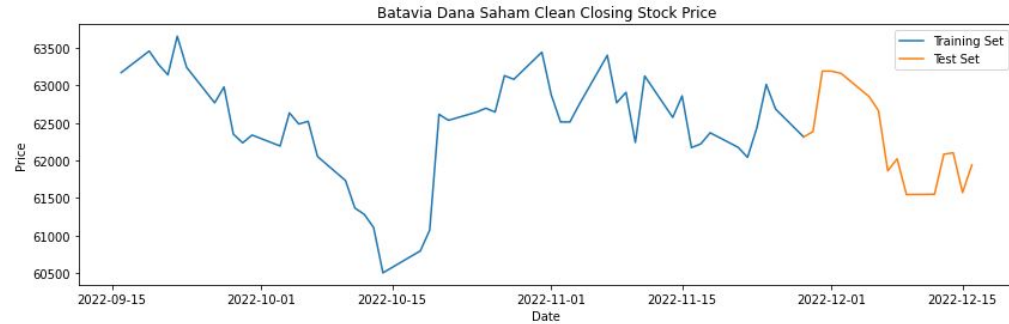
Medium Risk

Investors are willing to tolerate some fluctuations in your investment returns and moderate losses of capital

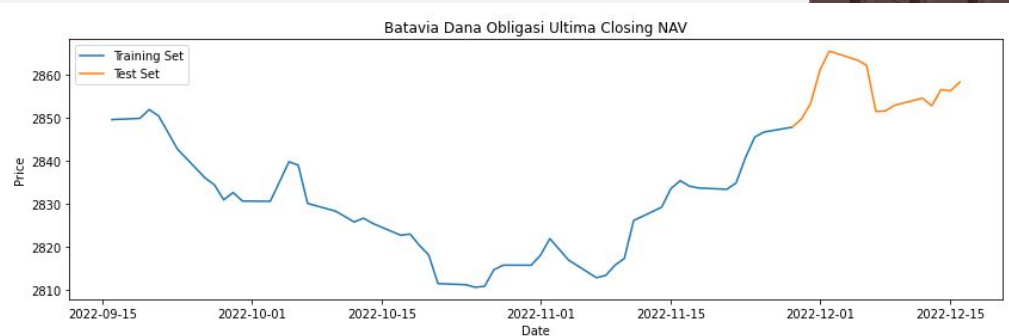
Low Risk

Investors have a low tolerance for risk and potential loss of capital or a short investment time horizon

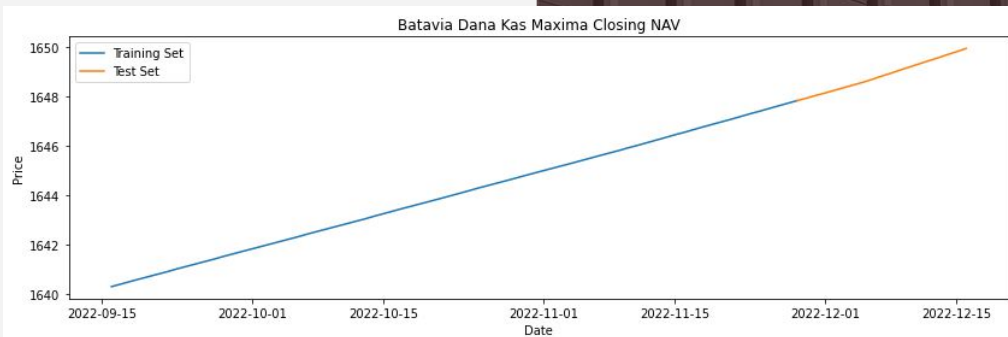
High Risk



Medium Risk



Low Risk





Mutual Funds Recommendation System

Money Market Fund

100% in money market instruments and/or debt securities with a maturity of **less than 1 year**.

Fixed Income Fund

At least 80% in debt securities such as bonds or debentures. This Mutual Fund is suitable for short-term investment within a period of between **1 – 3 years**.

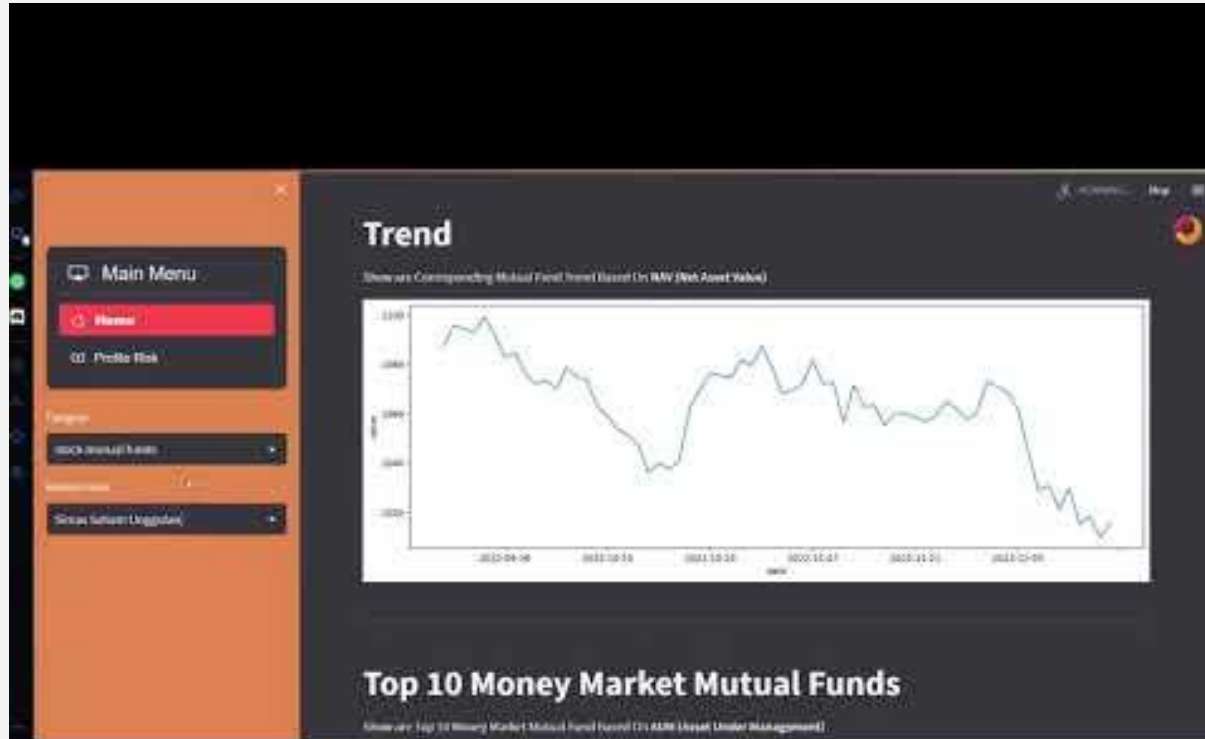
Balance Mutual Fund

Maximum 79% in stocks, bonds and money market instruments such as deposits. This Mutual Fund is suitable for medium term investment between **3 – 5 years**.

Equity Fund

Minimum 80% in Stocks investment. This Mutual Fund is suitable for long term investment with a period of **5 years or more**.

Model Process





04

Stories of
the Process



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📺 Profile Risk

0 10 years or more 10 years or more Very experienced (≥ 10 years) For the long term wealth growth Very stable > 50% > 50% Sell all the remaining inve



Profile Risk: Medium Risk

You have a moderate tolerance for risk and loss of capital. Investors are willing to tolerate some fluctuations in your investment returns and moderate losses of capital. Investors have at least a medium term investment time horizon. The objective of investors portfolio will be to provide a combination of income and long term capital growth and therefore the portfolio will include at least 40% in fixed income investments.

Our Recommendation:

	Mutual_Funds	Predicted_NAV	Percentage	Label	AUM
9	Danamas_Stabil Clean	4,297.0000	0.0300	1	15.9200
7	Sucorinvest Stable Fund Clean	1,243.0000	0.0700	1	14.5600
4	Eastspring IDR Fixed Income Fund Kelas A Clean	1,600.0000	0.0900	1	5.5700

Success Stories

High Risk

High risk error: 82.30

Deployment

Running on HuggingFace,
people can access it

We lower the
error from
our model
will give more
benefits!

Net Asset Value Low and Medium Risk

Example Difference:

Low Risk error: **0.18**,
Medium Risk error: **8.49**

Challenges and Limitation



Limited Source of Data

Some good data are limited for internal only (bibit.com). The complete data is not for free or “member only”, such as Bareksa.



Number of Data

The number of data should be more than 3 months to get a better result.



Frontend Development

There are many things from frontend or the app that can be developed even more.



Stretch Goal

Real-time Data

Using real time data for optimal predictions and according to user needs

Research & Improvement

Conduct research for critical parameters and combine models to improve the accuracy of DiFA

App

Create a DiFA application into a website or mobile app so that more easy to use

Fin.

Does anyone have any questions?

Hactiv8 RMT Batch-016 Group 2

For more information:

