

**Artwork/Project Title**

**ASEAN DSE 2022:  
'Reduce Carbon Footprint'**

**Year Accomplished**

2022

**Role/Position**  
Data Scientist**Publication Link**  
<https://github.com/belindamutiara/Po>**Artwork/Project Description**

Conducted research using SAP software to analyze the relationship between CO<sub>2</sub> emissions and GDP in Indonesia. It turns out that CO<sub>2</sub> and GDP have a positive relationship, the higher the CO<sub>2</sub> emissions, the higher the GDP value in Indonesia. Thus, we proposed a long-term solution to convert CO<sub>2</sub> into renewable energy, specifically methanol, by designing a machine that utilizes natural resources such as solar heat and water. The proposed method has the potential to reduce CO<sub>2</sub> emissions while simultaneously generating income through the production of renewable energy that can be utilized by the country.



Figure 1 Opening: "Reduce Carbon Footprint"

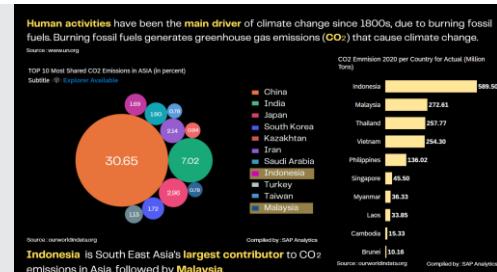


Figure 2 Indonesia ranks first in ASEAN as CO<sub>2</sub> Emitter

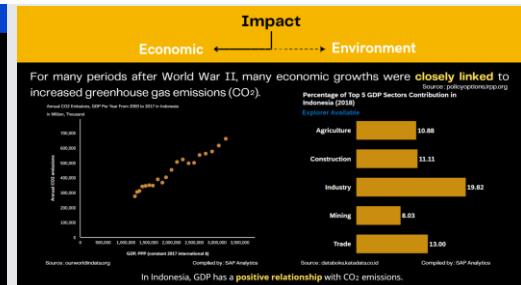


Figure 3 CO<sub>2</sub> has positive impacts on economic

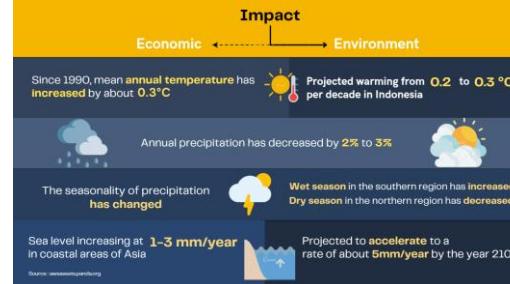


Figure 4 CO<sub>2</sub> has negative impacts on environment

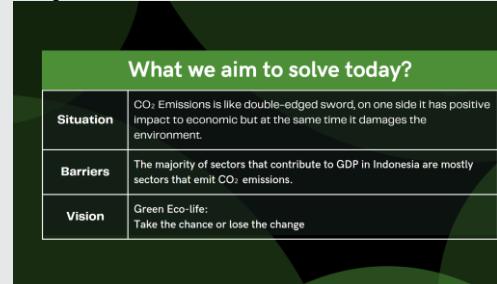


Figure 5 The situation, barriers, and vision



Figure 6 First Solution



Figure 7 Second Solution



Figure 8 Closing Statement

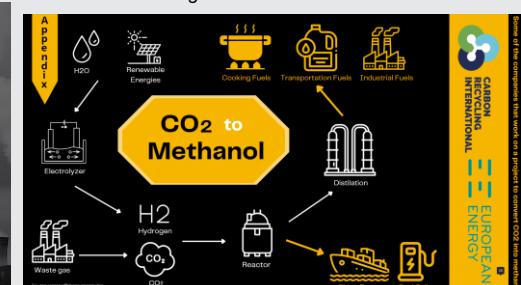


Figure 9 Appendix

**Artwork/Project Title**

ASEAN Sales

**Year Accomplished**

2022

**Role/Position**

Data Scientist

**Publication Link**[https://bit.ly/ASEANSales\\_BelindaMutriar](https://bit.ly/ASEANSales_BelindaMutriar)**Artwork/Project Description**

For my second semester lab assignment, I use Tableau to analyze sales conditions in the ASEAN region. Through my analysis, I found that the Philippines sells the most products but has the lowest profit. As I delved deeper into the data, I discovered an intriguing correlation between discounts and profit. I began by examining the relationship between each variable, and then focused on the most interesting relationship that emerged as a topic for further exploration. Then I did an analysis regarding the cause of the phenomenon until I got an "aha!" moment.

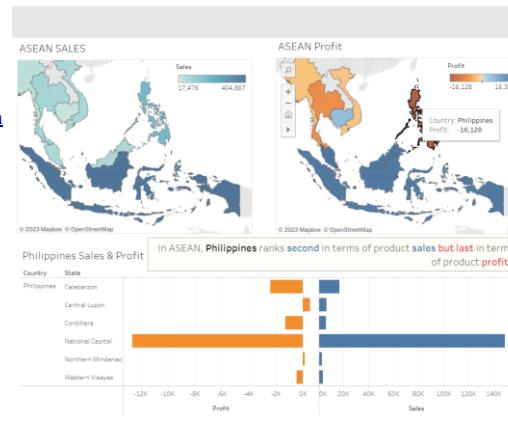


Figure 1 Shopping Sales in ASEAN

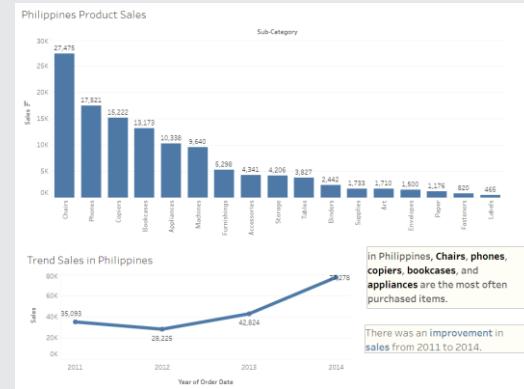


Figure 2 Philippines Product Sales



Figure 3 Manila as a double-edge sword



Figure 4 Where does Manila's profit come from



Figure 5 The Discount!

So my suggestions are:

1. Increase sales of chair products and reduce sales of copiers.
2. Increase marketing to consumers in the home officer segment
3. Increase the number of ship modes using the same day instead of the standard (for example, by providing a fairly cheap price)
4. Try to give more coupons or discounts to attract new customers

Belinda Mutriar - 2540119596

Figure 6 Suggestion

**Artwork/Project Title**

World Covid-19 Cases

**Year Accomplished**

2022

**Role/Position**

Data Scientist

**Publication Link**[https://bit.ly/WorldCovid19Cases\\_BelindaM](https://bit.ly/WorldCovid19Cases_BelindaM)**Artwork/Project Description**

For my second semester final lab exam, I used Tableau to analyze the spread of Covid-19, with a focus on Texas, which has the highest number of positive cases and deaths in the Americas. Using data on the highest number of cases and deaths, I created a visualization summarizing the conditions of the virus spread. Based on my findings, I recommend implementing the Zero Covid protocol, which has been successful in China in immediately reducing transmission rates.

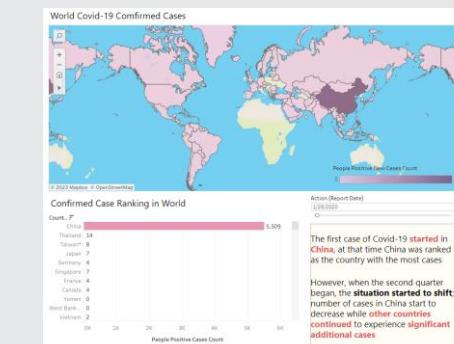


Figure 1 The Beginning of Pandemic

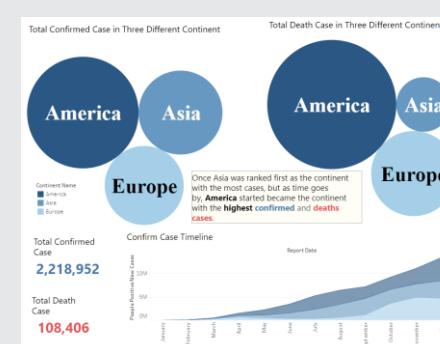


Figure 2 The Situation is Starting to Change



Figure 4 Texas as the country with the most positive cases

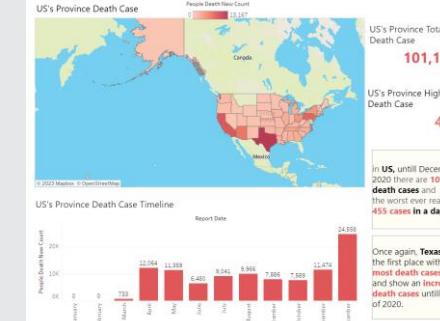


Figure 5 Texas as the country with the most death cases



Figure 3 US as the country with the most concerning conditions

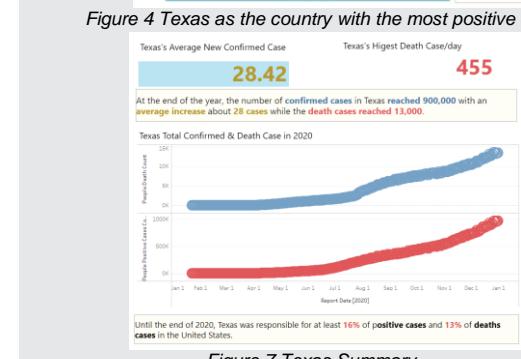


Figure 7 Texas Summary

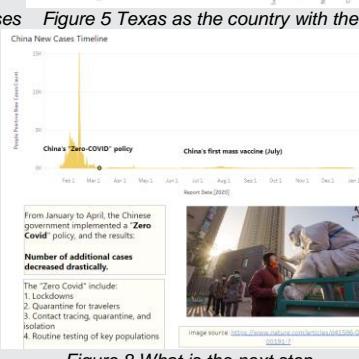


Figure 8 What is the next step

So, here are my suggestions:

1. The government should start implementing stricter protocols such as implementing a lockdown, traveler quarantine, and so on, especially in Texas.
2. People are encouraged to constantly wear masks and avoid crowds.
3. Increase monitoring, especially towards the end of the year.
4. Despite the fact that the number of deaths is lower than the number of confirmed cases, the public should be aware to be aware.

Figure 8 Suggestions

Artwork/Project Title

Predicting Customer Churn

Year Accomplished

2023

Role/Position  
Data Scientist

Publication Link

<https://github.com/belindamutiara>

Project 4 of 20

### Artwork/Project Description

For the final project in machine learning course, I led a team in building and comparing four machine learning models (Logistic Regression, GNB, Random Forest, and LGBM) to predict whether a customer categorize as churn or not. We achieved the highest accuracy of 86% using the LGBM model. At this project We conducted data exploration, data preprocessing, data mining, and modelling using Python language. We found three main factors that affect customer churn, they are age, credit score, and balance.

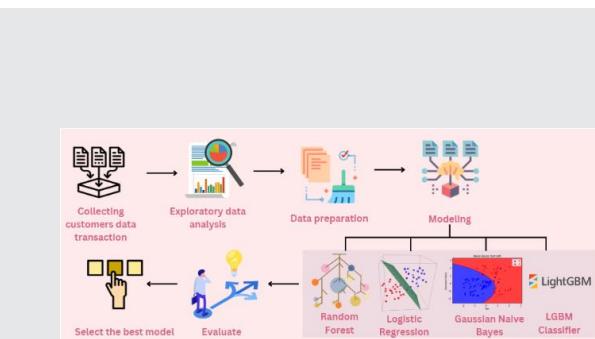


Figure 1 Methodology



Figure 2 Data Visualization for categorical data type

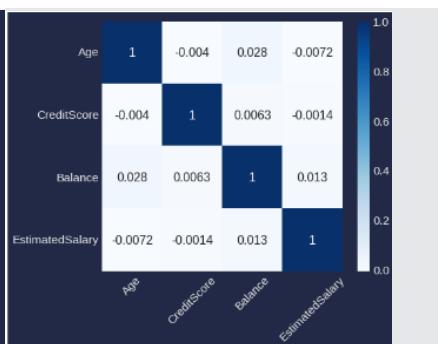


Figure 3 Correlation matrix

```
### Get performance metrics
lgbm_score = metrics.accuracy_score(y_test, lgbm_pred) * 100

### Print classification report
print("Classification report for %s:\n%s\n" % (lgbm, metrics.classification_report(y_test, lgbm_pred)))
print("Accuracy score:", lgbm_score)

Classification report for LGBMClassifier():
precision    recall   f1-score   support
          0       0.91      0.92      0.91     1607
          1       0.65      0.62      0.63     393

accuracy                           0.86    2000
macro avg       0.78      0.77      0.77    2000
weighted avg    0.86      0.86      0.86    2000

Accuracy score: 86.0
```

Figure 4 Model Building

	Accuracy Score	Recall Score	Precision Score
Logistic Regression	72.50000	72.50000	81.120194
Gaussian Naive Bayes	73.75000	73.75000	81.024120
Random Forest	83.10000	83.10000	84.185744
LGBM Classifier	86.00000	86.00000	85.743669

Figure 5 Metrics evaluation



Figure 6 Visualization of metrics evaluation

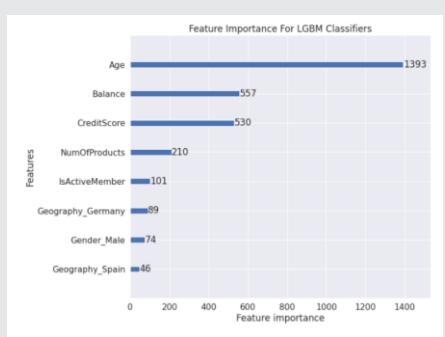


Figure 7 Feature Importance

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**  
Insurance Classification  
Using Artificial Neural  
Network

**Year Accomplished**

2023

**Role/Position**  
Data Scientist

**Publication Link**

<https://github.com/belindamutia>

### Artwork/Project Description

This project was part of my Deep Learning course's mid-semester exam. The task was to implement classification using an Artificial Neural Network (ANN). To begin, I conducted data exploration, data cleaning, data preparation, and developed a baseline model. Later, I was given the task to improve the model's accuracy by making modifications through my model. The key task was to develop the best model based on the data problem, which required comprehensive data analysis. Finally, my efforts resulted in a perfect score of 100 from my lecture.

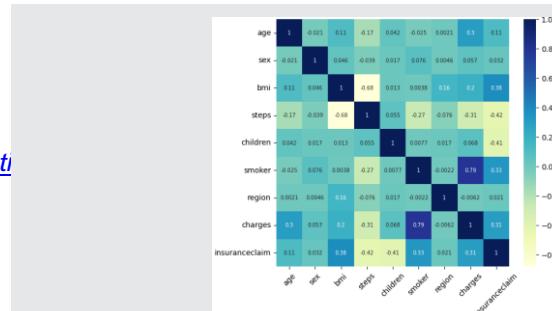


Figure 1 Correlation Matrix

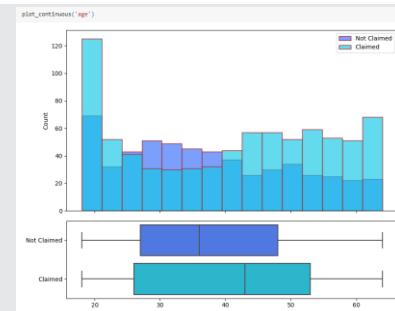


Figure 2 Distribution & Outlier

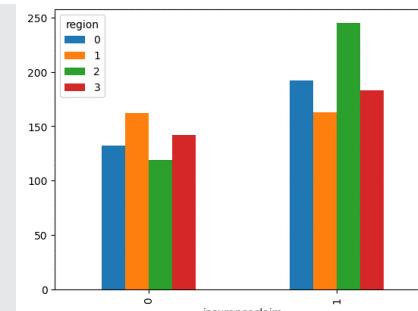


Figure 3 Multivariate Analysis

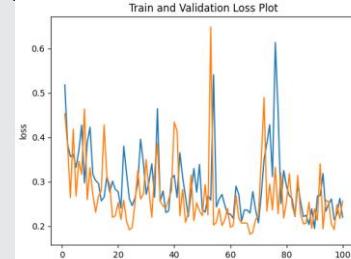


Figure 4 Training & Validation: Baseline  
Train and Validation Loss Plot

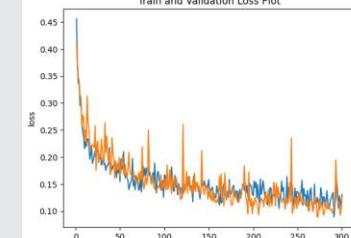


Figure 6 Training & Validation: Modification  
Train and Validation Loss Plot

Classification Report:				
	precision	recall	f1-score	support
0	0.76	0.92	0.83	52
1	0.94	0.82	0.88	82
accuracy			0.86	134
macro avg	0.85	0.87	0.86	134
weighted avg	0.87	0.86	0.86	134

Figure 5 Classification Report: Baseline

Classification Report:				
	precision	recall	f1-score	support
0	0.87	0.92	0.90	52
1	0.95	0.91	0.93	82
accuracy			0.92	134
macro avg	0.91	0.92	0.91	134
weighted avg	0.92	0.92	0.92	134

Figure 7 Classification Report: Modification

**Artwork/Project Title**  
Batik Classification Using Convolutional Neural Network

**Year Accomplished**  
2023

**Role/Position**  
Data Scientist

**Publication Link**  
<https://drive.google.com/drive/folders/1Cpe>

### Artwork/Project Description

This project was part of my Deep Learning course's mid-semester exam. The objective was to implement classification using a Convolutional Neural Network (CNN) on batik data. To begin, I conducted data exploration, data cleaning, data preparation, and developed a baseline model. After that, I performed architecture modifications and parameter tuning to achieve the best results. The main challenge was the limited amount of data available and the low quality of the images. To address this, I diligently investigated the root causes and explained why the obtained results were not significantly high. At the end, my hard work paid off, and I received a perfect score of 100 from my instructor.

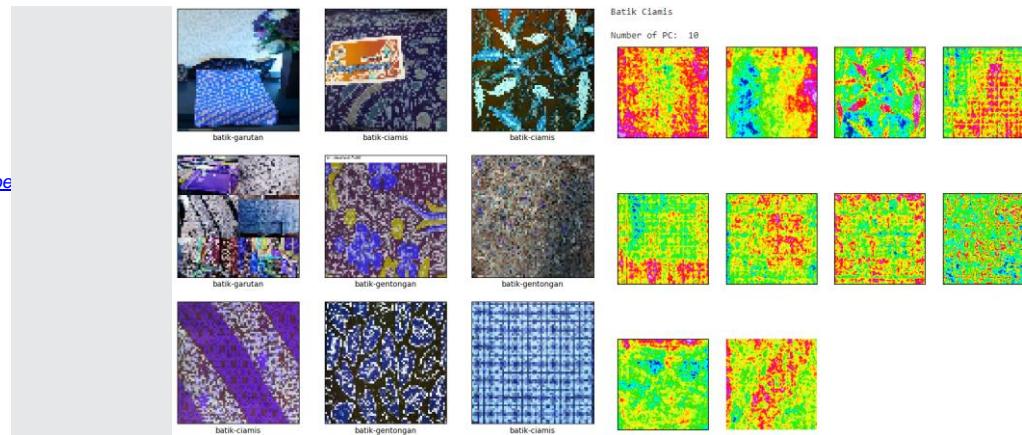


Figure 1 Data Preview

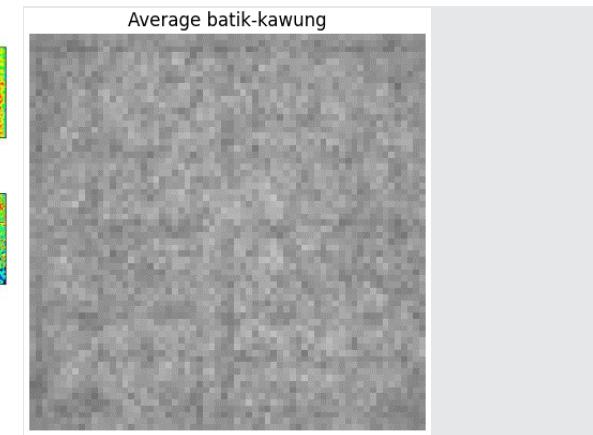


Figure 2 Eugen images

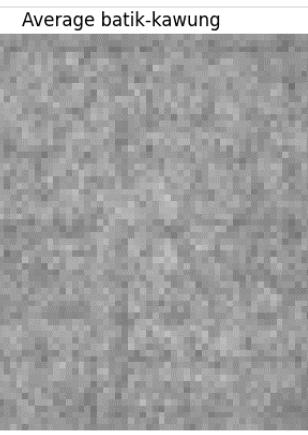


Figure 3 Average Image

```
model = keras.Sequential()
model.add(layers.Conv2D(filters=64, kernel_size=(5, 5),
                      strides=(1, 1), activation='relu', padding='valid',
                      input_shape=(64, 64, 3)))
model.add(layers.MaxPool2D(pool_size=(13, 13), strides=(2, 2), padding='valid'))

model.add(layers.Conv2D(filters=256, kernel_size=(5, 5),
                      strides=(1, 1), activation='relu',
                      padding='same'))

model.add(layers.MaxPool2D(pool_size=(2, 2), strides=(2, 2)))

model.add(layers.Conv2D(filters=384, kernel_size=(3, 3),
                      strides=(1, 1), activation='relu',
                      padding='same'))

model.add(layers.Conv2D(filters=384, kernel_size=(3, 3),
                      strides=(1, 1), activation='relu',
                      padding='same'))

model.add(layers.Conv2D(filters=192, kernel_size=(3, 3),
                      strides=(1, 1), activation='relu',
                      padding='same'))

model.add(layers.MaxPool2D(pool_size=(1, 1), strides=(1, 1)))
model.add(layers.Flatten())
model.add(layers.Dense(4096, activation='relu'))

model.add(layers.Dense(5, activation='softmax'))

optimizer = keras.optimizers.Adam(learning_rate=0.1)
model.compile(loss='categorical_crossentropy',
              optimizer=optimizer,
              metrics=['accuracy'])
model.summary()
```

Figure 4 Convolutional Neural Network

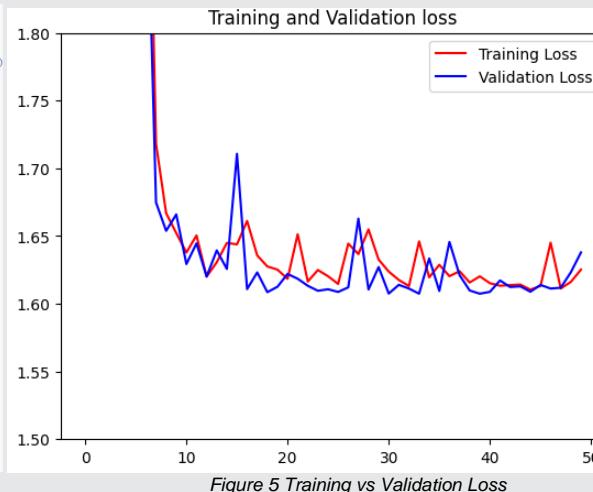


Figure 5 Training vs Validation Loss

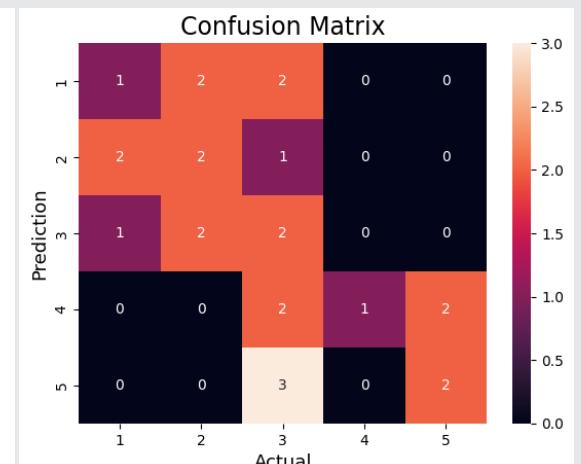


Figure 6 Confusion Matrix

Belinda Mutiara

BINUS Students 5<sup>th</sup> Semester

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Portfolio Submission for

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BINUS Internship Track  
2024

**Artwork/Project Title**

Market Clustering

**Year Accomplished**

2023

**Role/Position**

Data Scientist

**Publication Link**<https://colab.research.google.com/drive/1h>**Artwork/Project Description**

During my holiday, my friend and I made a machine learning project about clustering. We want to learn and practice unsupervised learning using grocery firm dataset. By using the Python language, we found that this data could be divided into 4 or 5 clusters, but in our experiments, we obtained better results in cluster 5. A lot of data preparation was carried out on this dataset, for handled missing values, renamed column, then we also did feature engineering on several attributes. After preparing the data, we did PCA, this is because the number of dimensions/attributes of this dataset is very large.

Project 7 of 20

	count	mean	std	min	25%	50%	75%	max
ID	2240.0	5592.159821	3246.662198	0.0	2828.25	5458.5	8427.75	11191.0
Year_Birth	2240.0	1958.805804	11.984069	1893.0	1959.00	1970.0	1977.00	1996.0
Income	2216.0	52247.251354	25173.076661	1730.0	35303.00	51381.5	68522.00	666666.0
Kidhome	2240.0	0.444196	0.536398	0.0	0.00	0.0	1.00	2.0
Teenhome	2240.0	0.506250	0.544538	0.0	0.00	0.0	1.00	2.0
Recency	2240.0	49.109375	28.962453	0.0	24.00	49.0	74.00	99.0
MntWines	2240.0	303.935714	336.597393	0.0	23.75	173.5	504.25	1493.0
MntFruits	2240.0	26.302232	39.773434	0.0	1.00	8.0	33.00	199.0
MntMeatProducts	2240.0	166.950000	225.71573	0.0	16.00	67.0	232.00	1725.0

Figure 1 Data Description

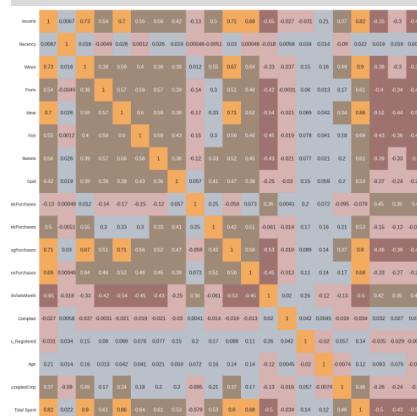


Figure 4 Correlation Matrix

## ▼ Age

```
[ ] #Feature Engineering
#Age of customer today
df_clean["Age"] = 2023 - df_clean["Year_Birth"]

<ipython-input-22-56cf5270f72>:3: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead
```

Figure 2 Feature Engineering

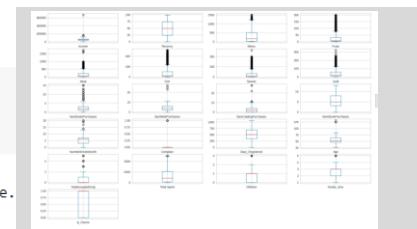


Figure 3 Outlier

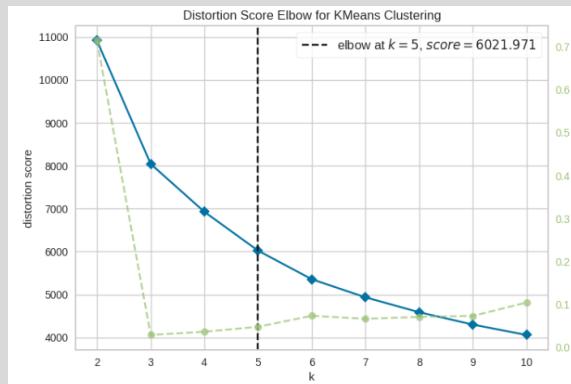


Figure 5 Elbow Score

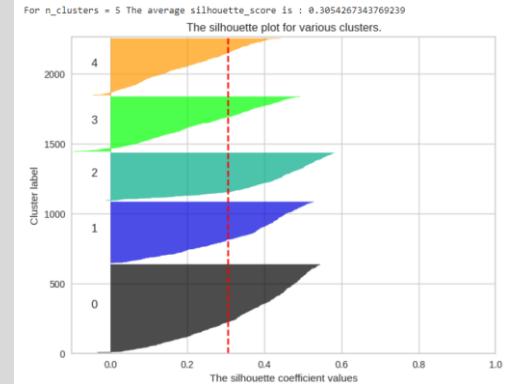


Figure 6 Shillhouette Score

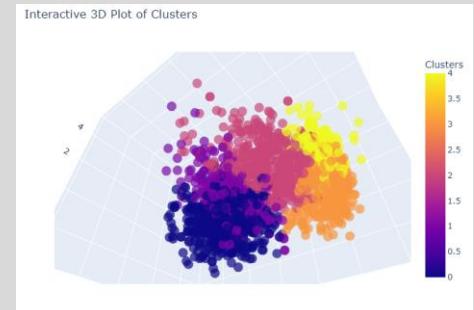


Figure 7 Clustering K-Means 5

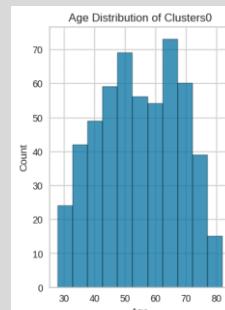


Figure 8 Profiling Age

CLUSTER 0	
1	252
2	166
0	39
Name:	Education, dtype: int64
0	246
1	211
Name:	Is_Alone, dtype: int64
2	247
1	178
3	32
Name:	Family_Size, dtype: int64

Figure 9 Profiling Education, Whether alone or not, and Family Size

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Portfolio Submission for

BINUS Internship Track  
2024

**Artwork/Project Title**  
UN Hackathon: "Peace is The Key"

**Year Accomplished**  
2022

**Role/Position**  
Data Scientist

**Publication Link**  
<https://github.com/belindamutir>

### Artwork/Project Description

I collaborated with my friends to conduct an analysis on the state of the Ukrainian economy due to the Russia-Ukraine war. Using Python programming language, we performed data analysis and visualization to gain insights about the situation. The main challenge is that the time was very limited, we are only given less than 3 days to complete the analysis and recommendations. The solution to this problem is to consistently work and divide tasks so we were able to meet the deadline. Our analysis starts with selecting a topic, data mining, preprocessing the data, drawing insightful conclusions, and researching effective step that might help to prevent inflation in Ukraine from continuing to rise.

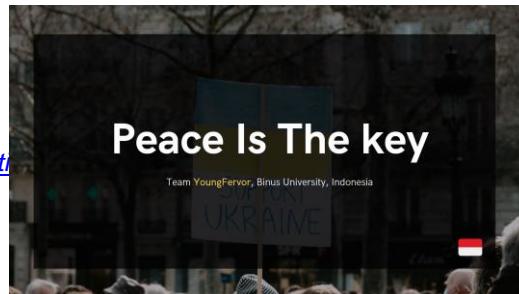


Figure 1 Title

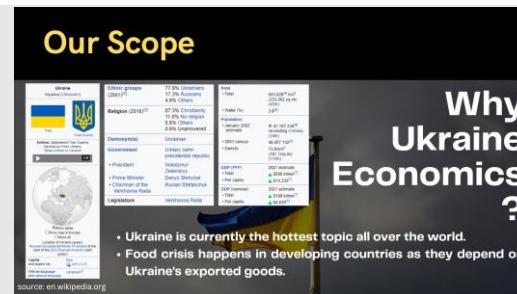


Figure 2 Scope

What we aim to solve today?	
<b>Situation</b>	Under the pressure of rising food, energy, and key commodity prices, the conflict against Ukraine has been accompanied by a rapid increase in inflation.
<b>Vision</b>	Ukraine economic recovery as soon as possible

Figure 3 Situation and Vision

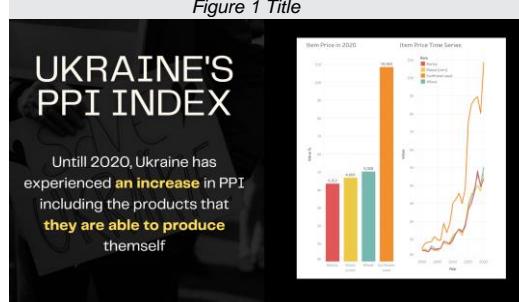


Figure 4 Ukraine's PPI Index

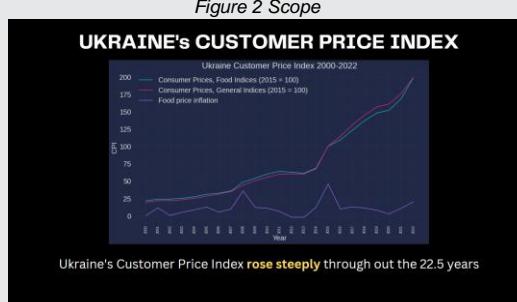


Figure 5 Ukraine's CPI Index



Figure 6 Ukraine Increasing & Decreasing area

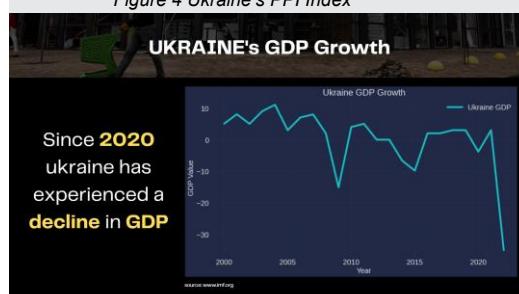


Figure 7 Ukraine's GDP Growth



Figure 8 Solution 1



Figure 9 Closing Statement

Belinda Mutiara

BINUS Students 5<sup>th</sup> Semester

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**

Analisis Penyebab Kematian di Indonesia

**Year Accomplished**

2023

**Role/Position**

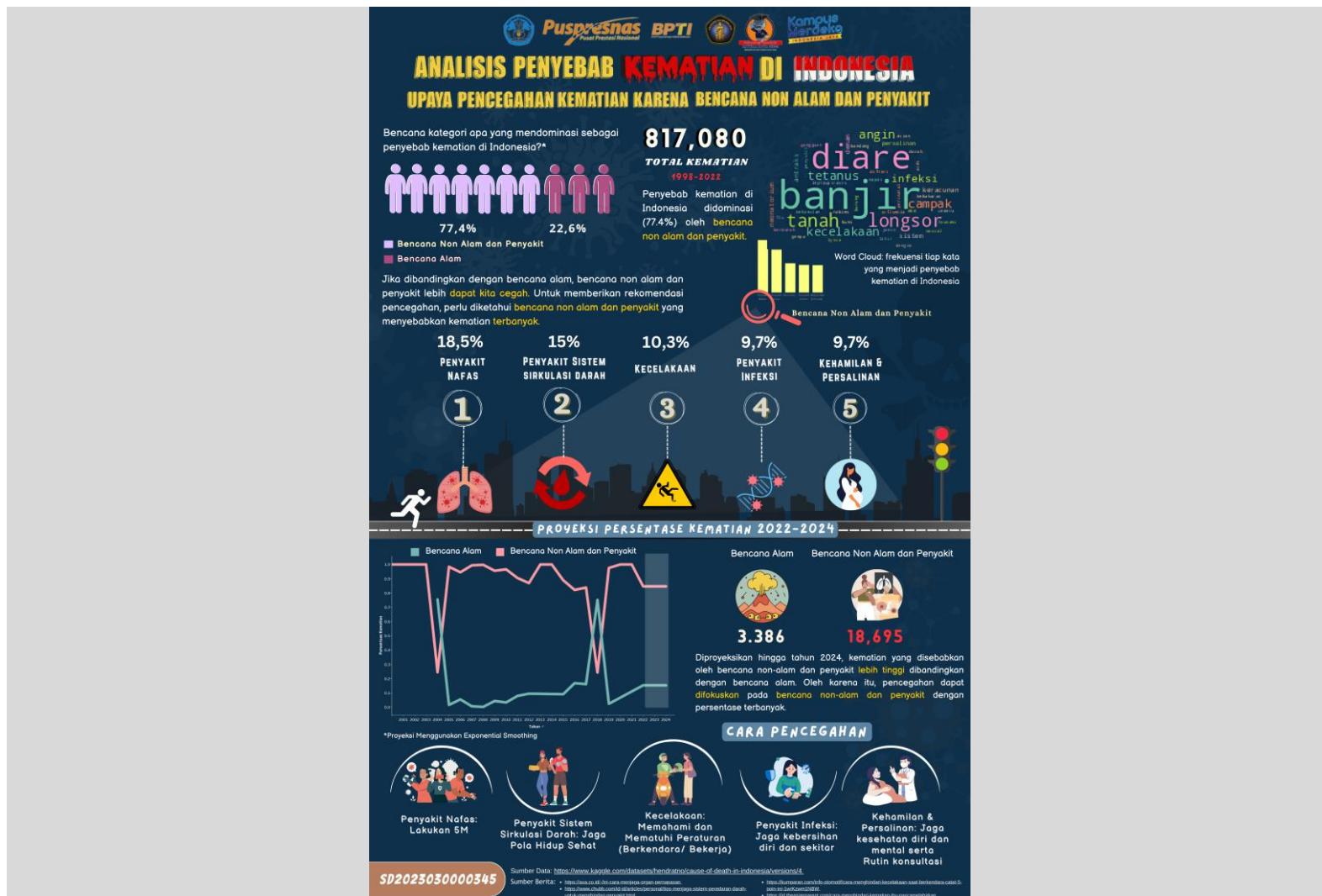
Data Scientist

**Publication Link**

[https://bit.ly/BelindaM\\_SatriaData](https://bit.ly/BelindaM_SatriaData)

**Artwork/Project Description**

In June 2023, I participated in the Satria Data Branch Infographic Competition. For this competition, I use a dataset about the causes of death in Indonesia. Using Python for analysis, I discovered that respiratory diseases stood out as the primary cause of death resulting from non-natural disasters in the country. In addition, by using exponential smoothing, it is expected an increase in non-natural disaster-related deaths in 2024. This emphasizes the importance of proactive measures to mitigate such incidents.



**Artwork/Project Title**  
Cyclitic Bike Google Professional Certification  
**Year Accomplished**  
2023

**Role/Position**  
Data Scientist

**Publication Link**

<https://github.com/belindamutiara/Portofolio>

### Artwork/Project Description

In chapter 8 of the Google Data Analytics Professional Certification, I was asked to analyze bicycle company data. Using the R language, I found that casual riders tend to use their bicycles on holidays while annual members tend to use them on weekdays. One solution that could be proposed is to host fun biking competitions with prizes at intervals for members on the weekends. Since there are lots of casual riders on weekends, this will also attract them to get a membership.

Project 10 of 20

```
```{r}
# Read the trip data from 2005 - 2010 (12 months)
tripdata_2005_05 <- read.csv("input/2005-divvy-tripdata/2005-divvy-tripdata.csv")
tripdata_2006_06 <- read.csv("input/2006-divvy-tripdata/2006-divvy-tripdata.csv")
tripdata_2007_07 <- read.csv("input/2007-divvy-tripdata/2007-divvy-tripdata.csv")
tripdata_2008_08 <- read.csv("input/2008-divvy-tripdata/2008-divvy-tripdata.csv")
tripdata_2009_09 <- read.csv("input/2009-divvy-tripdata/2009-divvy-tripdata.csv")
tripdata_2010_10 <- read.csv("input/2010-divvy-tripdata/2010-divvy-tripdata.csv")
tripdata_2011_11 <- read.csv("input/2011-divvy-tripdata/2011-divvy-tripdata.csv")
tripdata_2012_12 <- read.csv("input/2012-divvy-tripdata/2012-divvy-tripdata.csv")
tripdata_2013_01 <- read.csv("input/2013-divvy-tripdata/2013-divvy-tripdata.csv")
tripdata_2014_02 <- read.csv("input/2014-divvy-tripdata/2014-divvy-tripdata.csv")
tripdata_2015_03 <- read.csv("input/2015-divvy-tripdata/2015-divvy-tripdata.csv")
tripdata_2016_04 <- read.csv("input/2016-divvy-tripdata/2016-divvy-tripdata.csv")
````
```

Figure 1 Read Data

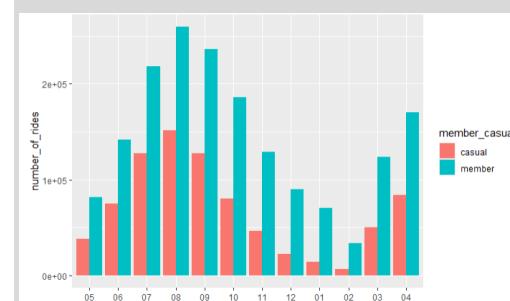


Figure 4 Monthly number of rides casual and annual member

```
```{r}
#Drop all NAs
all_trips_v2 <- drop_na(all_trips_v2)
dim(all_trips_v2)
summary(all_trips_v2)
# Confirmed all the NA is gone.
````
```

Figure 2 Data Cleaning

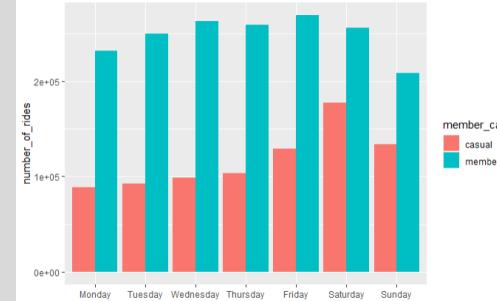


Figure 5 Daily number of rides casual and annual member

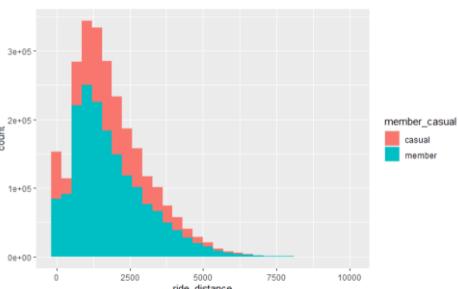


Figure 3 Total casual and annual members

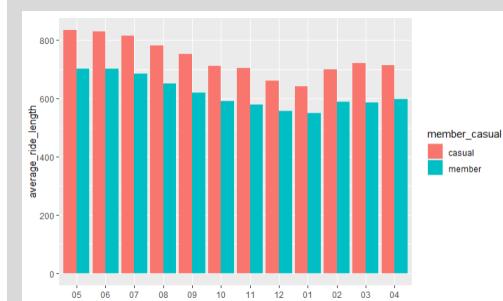


Figure 6 Monthly number of rides length casual and annual

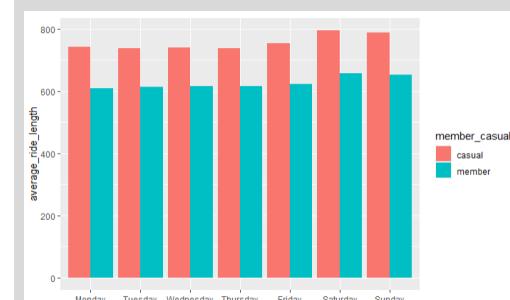


Figure 7 Daily number of rides length casual and annual

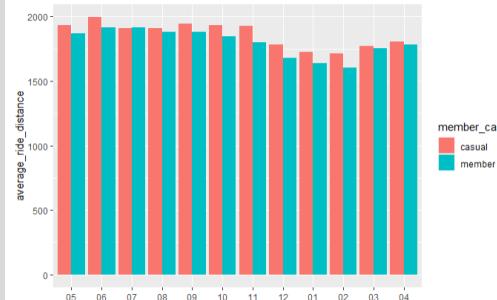


Figure 8 Monthly number of rides distance casual and annual

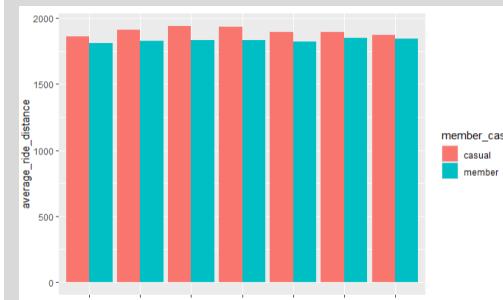


Figure 9 Daily number of rides distance casual and annual

**Artwork/Project Title**

**Stroke Prediction Using Logistic Regression**

**Year Accomplished**

2022

**Role/Position**

Data Scientist

**Publication Link**

<https://rpubs.com/belindamutiara/929798>

**Artwork/Project Description**

As part of my second-semester exam project, I successfully implemented logistic regression and decision tree algorithms in R language to predict stroke. The project encompassed various stages, including data overview, data preparation, data mining, model building, and evaluation. By leveraging my strong analytical and technical skills, I achieved an accuracy rate of 83% using logistic regression and an impressive 95% accuracy using a decision tree.

```
## 'data.frame': 5110 obs. of 12 variables:
## $ id      : int 9046 51676 31112 60182 1665 56669 53882 10434 27419 60491 ...
## $ gender   : chr "Male" "Female" "Male" "Female" ...
## $ age      : num 67 61 80 49 79 81 74 69 59 78 ...
## $ hypertension: int 0 0 0 1 0 1 0 0 0 ...
## $ heart_disease: int 1 0 1 0 0 0 1 0 0 0 ...
## $ ever_married: chr "Yes" "Yes" "Yes" ...
## $ work_type : chr "Private" "Self-employed" "Private" "Private" ...
## $ Residence_type: chr "Urban" "Rural" "Rural" "Urban" ...
## $ avg_glucose_level: num 229 202 106 171 174 ...
## $ bmi      : chr "36.6" "N/A" "32.5" "34.4" ...
## $ smoking_status: chr "formerly smoked" "never smoked" "never smoked" "smokes" ...
## $ stroke    : int 1 1 1 1 1 1 1 1 1 1 ...
```

Figure 1 Data description

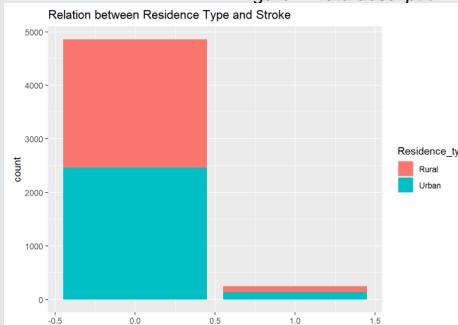


Figure 4 Data visualization

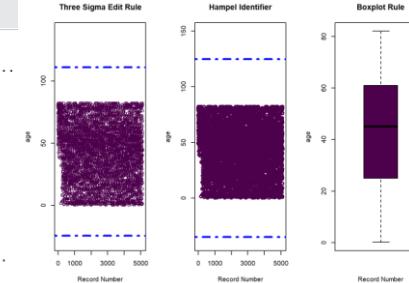


Figure 2 Outlier checking



Figure 3 Data visualization

I separated the data into two groups with an 80:20 ratio. Of course, the training set was bigger than the validation set. The training set contain of 4088 observations while validation set contain of 1021 observations.

```
LogisticModel <- glm(stroke~., data= trainingset, family='binomial'(link = "logit"))
summary(LogisticModel)
```

Accuracy for Validationset

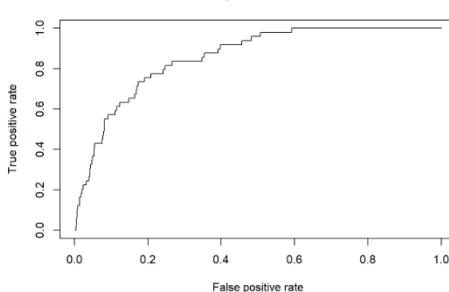


Figure 6 Evaluation on validation set  
Importance Attributes to Chance of Stroke

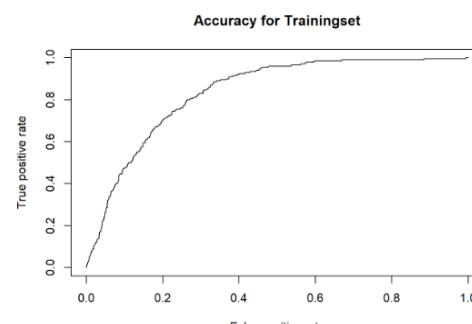


Figure 7 Evaluation on training set

Figure 5 Model Building

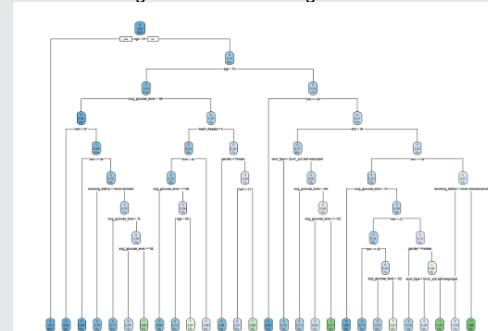


Figure 8 Decision Tree Model

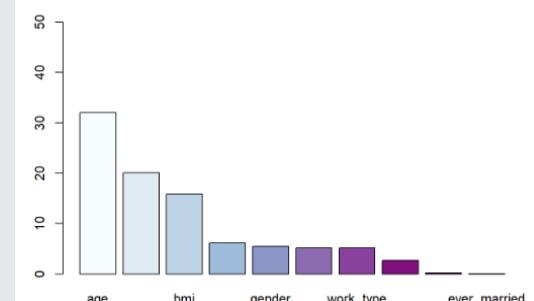


Figure 9 Feature Importance

## Role/Position

Data Scientist

## Publication Link

<https://github.com/belindamutiara/Portofolio>

## Artwork/Project Description

For my final semester 1 project, I focused on performing explanatory data analysis on the Titanic dataset. The primary objective was to process the data to ensure its readiness for modeling. To achieve this, I began by importing the necessary libraries and conducting a thorough data overview. Then I proceeded to handle missing values by filling them appropriately. Additionally, I normalized the data and removed any outliers that could potentially affect the analysis. To enhance the understanding of the data, I did various data visualization techniques. Through these steps, I ensured that the dataset was properly prepared for further modeling and analysis.



**Artwork/Project Title**  
Online Food Purchasing Database  
  
**Year Accomplished**  
2022

**Role/Position**  
Data Engineer

**Publication Link**  
[https://bit.ly/Database\\_foodGojek](https://bit.ly/Database_foodGojek)

### Artwork/Project Description

As part of my group database project, I designed a comprehensive database for an online food purchasing system using MySQL. The project posed several challenges, particularly in breaking down the data to ensure compliance with UNF to BCNF rules. I had to constantly re-learn each rule in every phase of the project and put in a lot of hard work to achieve the desired outcome. In the end, my efforts paid off as the final result of the database design was a 100% success. This project taught me the importance of attention to detail, persistence, and the value of hard work. I am proud of this project and confident in my ability to tackle complex database projects.

Project 13 of 20



Figure 1 Example of Functional Dependency

### TransactionDetail Table

| TransactionDetail |               |          |
|-------------------|---------------|----------|
| OrderID           | ItemID        | Quantity |
| F-1942805643      | IE94567218300 | 1        |
| F-1942805643      | IE84167924386 | 1        |

### Functional Dependency:

OrderID → ItemID, Quantity

Figure 2 TransactionDetail Table

```
CREATE DATABASE gojek_food
```

```
CREATE TABLE MsDistrict(
    DistrictID CHAR(5) PRIMARY KEY NOT NULL,
    DistrictName VARCHAR(100) NOT NULL
);
```

```
CREATE TABLE MsProvince(
    ProvinceID CHAR(5) PRIMARY KEY NOT NULL,
    ProvinceName VARCHAR(100) NOT NULL
);
```

Figure 3 Query for Create Database

```
INSERT INTO MsStore VALUES
    ("ST8945173962", "Chatime X Cupbop, LP Pamulang", "Komplek Pamulang Permai, Jalan Pamulang Permai 1", "KL001", "KC001",
    "KK001", "PV001", "PC001", 9000),
    ("ST6370240598", "Martabak Pecenongan 78", "Jalan Entong Gendut Nomor 94", "KL003", "KC005", "KK003", "PV005", "PC002",
    12000),
    ("ST3365348135", "Rujak & Asinan Buah Aa", "Jalan Sulaiman, Gang Amal 4 Nomor 16", "KL002", "KC005", "KK010",
    "PV003", "PC009", 9000),
```

Figure 3 Query for Insertion

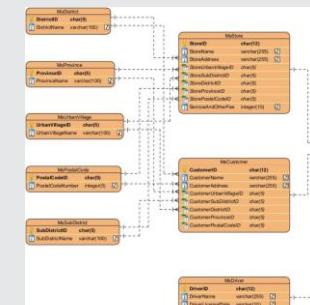


Figure 5 Entity Relationship Diagram

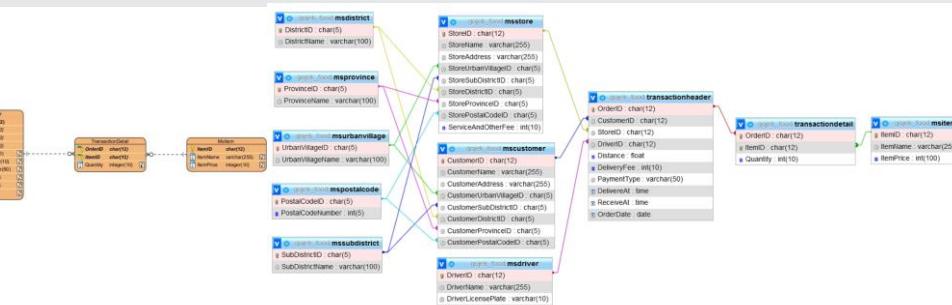


Figure 6 MySQL Database Structure

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**

**Graduate Admission  
Prediction**

**Year Accomplished**

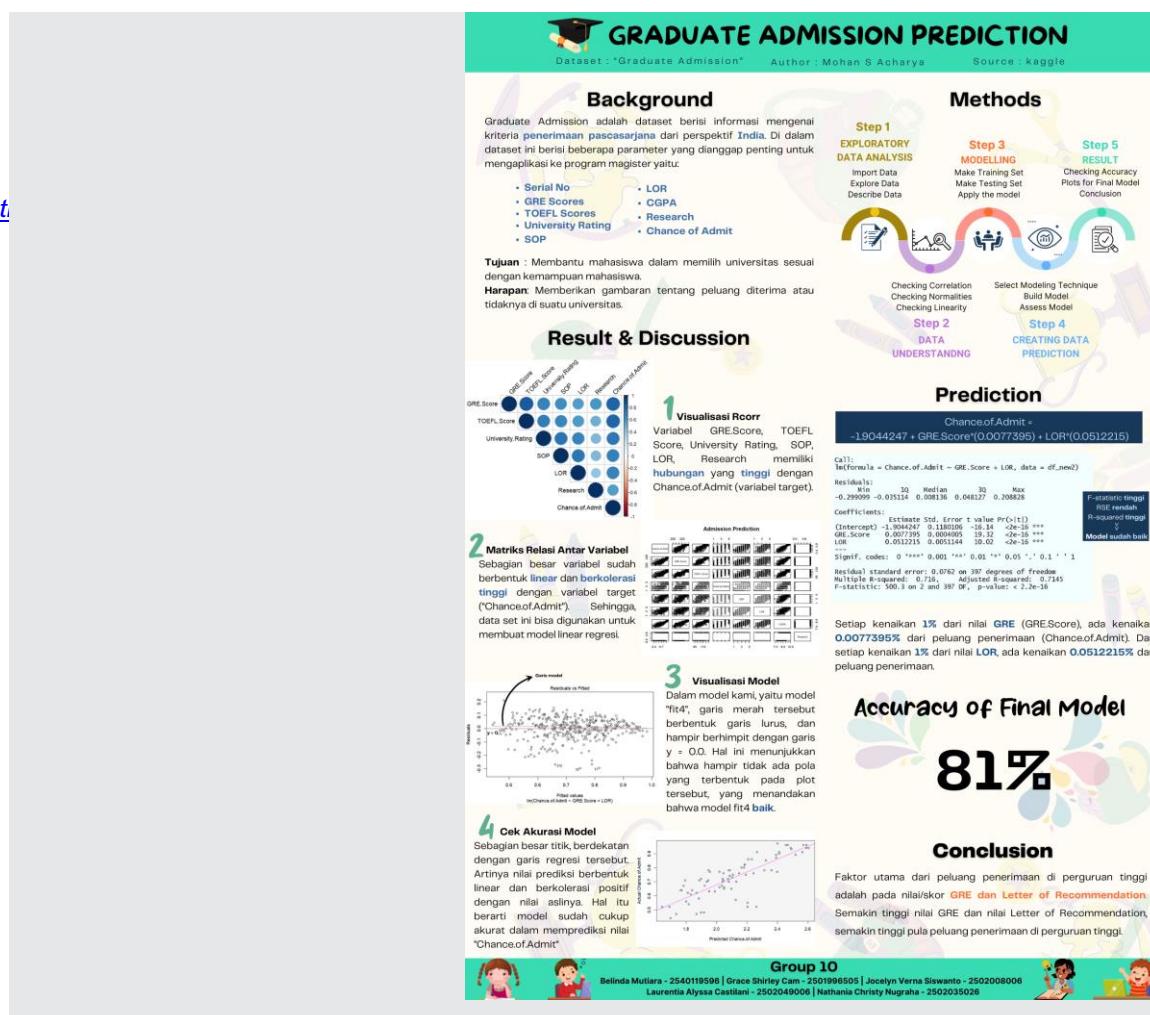
2022

**Role/Position**  
Data Scientist**Publication Link**

<https://github.com/belindamut>

**Artwork/Project Description**

This is my final project of the data mining and visualization course. In this project I analyzed and created a model that can predict the possibility of a student passing or failing to master's level. Here I use the R language to analyze and create a logistic regression model. From this data, I found that the most influences attribute to determine whether or not a student passes to the master's level is the GRE score and recommendation letter.



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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**  
**Student Engagement:**  
**Good Practice Encourages**  
**School-Faculty Contact**

**Year Accomplished**

2023

**Role/Position**  
Researcher

**Publication Link**  
[https://bit.ly/SSM\\_Kelompok9](https://bit.ly/SSM_Kelompok9)

### Artwork/Project Description

In order to improve the university's academic and non-academic quality, me and my friends was asked to conduct research on the relationship between school-faculty contact and student engagement. We found 3 exogenous variables: affective commitment, trust in honesty, and satisfaction. Meanwhile, the endogenous variables of student engagement are cognitive engagement, behavioral engagement, and affective engagement. Each of these variables has 5 indicators. We tested both variables and indicators using the Cronbach alpha test to measure reliability and Pearson correlation to measure validity. With 100 Binussian respondents, we got valid and reliable results on all variables and indicators.

## Student Engagement: Good Practice Encourages Student-Faculty Contact

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### I. ABSTRACT

Recently, SES has become important in the world of education. SES or better known as the Student Experience Survey is considered to play an important role in improving the quality of education. There are many factors that influence the student experience survey, one of them is the interaction that is formed between students and the faculty staff. In this study, researchers evaluate how well students are engaged. PLS SEM technique was used to measure this topic namely good practice encourages student-faculty contact. A survey that was shared using a Google form was utilised to collect the sample data that was used to measure this. Purposive sampling, a non-probability sampling method, was employed in the sampling process. To assess each indicator and the latent variables employed, the researcher identifies the related latent variables, their indicators, and proceeds a reliability test and a validity test. The validity test was measured using the table-R and Pearson Correlation, while the reliability test was measured using the Cronbach's alpha technique. The result that was obtained through this research are good enough to answer the problem that are found and in accordance with the objectives that have been made. There are 4 latent variables found in this study which are divided into two parts, namely exogenous variables, and endogenous variables. The exogenous variables obtained in this study are affective commitment, trust in honesty and satisfaction. The endogenous variable used corresponds to the topic of the research paper, student engagement: good practice encourages student-faculty contact. With three dimensions that can measure this endogenous variable, namely cognitive engagement, affective engagement, and behavioural engagement.

### II. INTRODUCTION

Recent theoretical developments have revealed that the student experience survey is one of the important features for the quality improvement and management of higher educational institutions. According to this statement, much research has been done to discuss and analyse the truth of this theory. Those research studies that are relevant to this paper's topic will be discussed and analysed in the literature review section. The main objective of this paper concentrates on the quality improvement in student engagement.

To support this research on this topic, a survey is needed to measure the student satisfaction in tertiary institution. This survey is called Student Experience Survey (SES). In US universities, measuring the level of student satisfaction has become a fundamental thing to do to improve the quality of higher educational institution. The result of the survey is the student feedback such as complaints and needs. In this research, the survey topic will be narrowed, the survey later will focus on the level of the student involvement with the institution (student-faculty contact). This involvement will be measured through the relationship that students have with the faculty and staff who are involved with student and the learning process in tertiary institution such as lecturers and head of study programs.

### A. Student Experience Survey (SES)

To maintain quality management, educational institutions must assess the quality of education through student satisfaction surveys. Considering different perspectives from students regarding their education experiences is crucial to sustain and enhance the quality of academic institutions. Recently there have been many studies and literature that have focused on improving student experience in tertiary institutions. Institutions are becoming increasingly

Figure 1 Abstract and Introduction

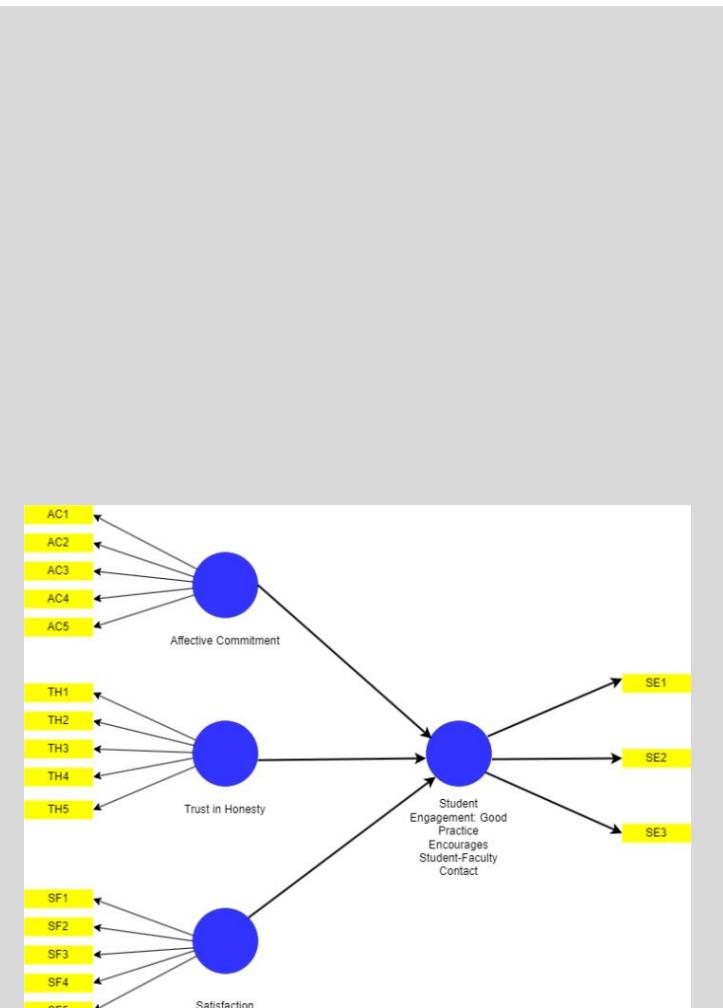


Figure 2 Path Diagram

**Artwork/Project Title**

FlixNation

**Year Accomplished**

2023

**Role/Position**  
UI/UX Designer

**Publication Link**

<https://www.figma.com/proto/ideMOSUyvrc>

Project 16 of 20

### Artwork/Project Description

I have created a UI/UX design for Human-Computer Interaction final project. In this project, I developed a website application for streaming content, similar to Netflix. The main focus of the design was to ensure a seamless user experience and intuitive interaction for the viewers. The website incorporates a clean and modern interface, allowing users to easily navigate through different categories and genres of content. I paid special attention to the visual hierarchy and typography to enhance readability and user engagement. Through this project, I had the opportunity to demonstrate my expertise in designing user-centered interfaces, highlighting my strong skills in the field of UI/UX design.



Figure 1 Splash Screen 1

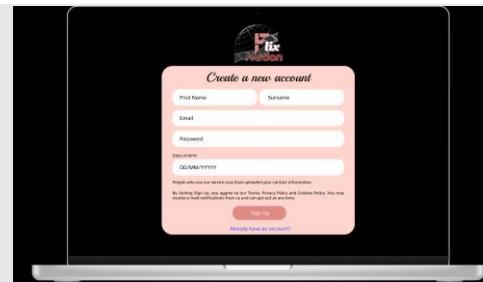


Figure 2 Register Page



Figure 3 Log-in Page

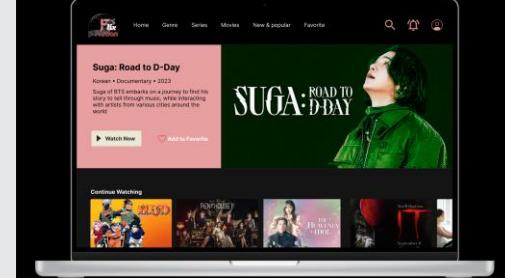


Figure 4 Home Page(1)



Figure 5 New and Popular

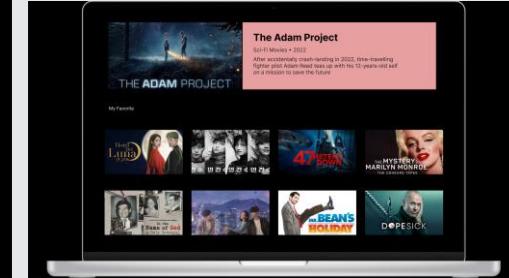


Figure 6 Favorite

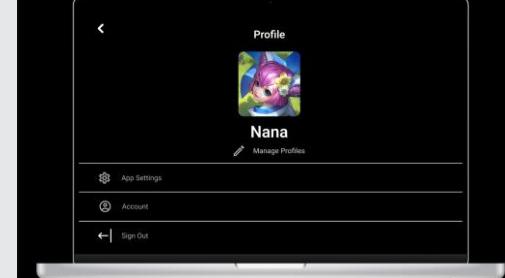


Figure 7 Profile Page

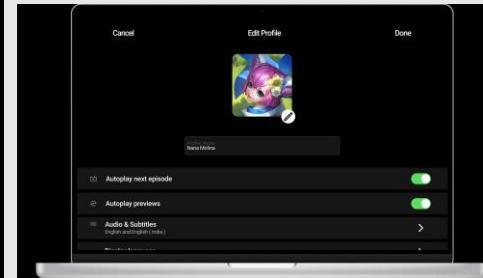


Figure 8 Manage Profile Page



Figure 9 Footer

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**  
CALM, Mental Health Web-based application

**Year Accomplished**  
2023

**Role/Position**  
UI/UX Designer

**Publication Link**  
<https://www.figma.com/proto/qHotvwcihEVid-23%3A799>

### Artwork/Project Description

CALM is an attractive and user-friendly mental health application web design. It offers easy access to consultations with psychologists and psychiatrists. The website features a splash screen for registration or login. The home page has a serene design with soothing colors. The profile page allows personalization. The appointment page simplifies booking, and the online and onsite service pages provide convenient options for virtual or in-person sessions. CALM combines aesthetics and functionality for a visually appealing and user-centric experience.

Project 17 of 20

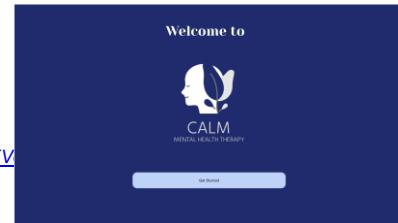


Figure 1 Splash Screen 1

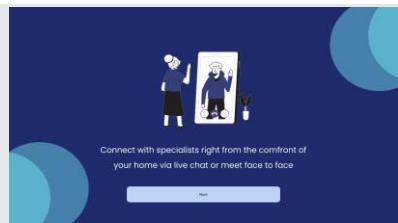


Figure 2 Splash Screen 2

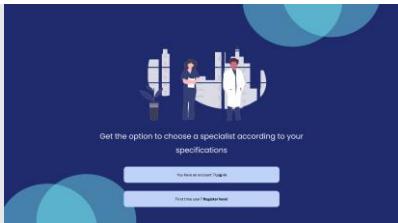


Figure 3 Splash Screen 3

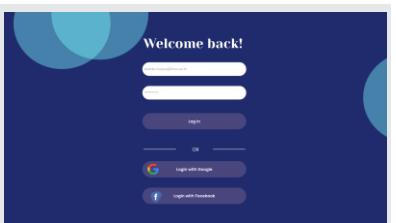


Figure 4 Login Page



Figure 5 Home Page (1)



Figure 6 Home Page (2)



Figure 7 Home Page (3)



Figure 9 Appointment Page

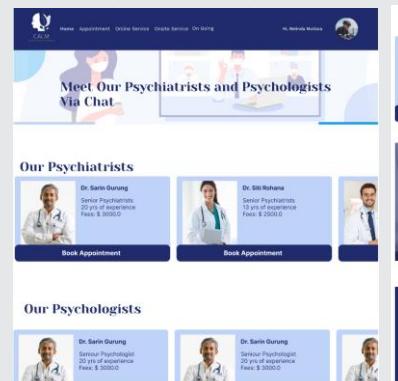


Figure 10 Psychologist & Psychiatrist

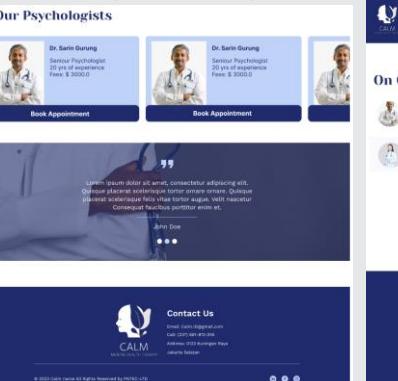


Figure 11 Psychologist & Psychiatrist

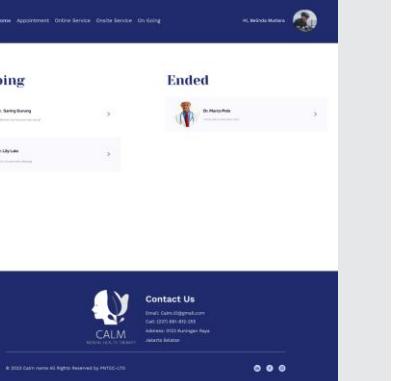


Figure 12 On Going Chat

**Artwork/Project Title**  
CALM, Mental Health Web-based application

**Year Accomplished**  
2023

**Role/Position**  
UI/UX Designer

**Publication Link**  
<https://www.figma.com/proto/qHotwcihEVid-23%3A799>

### Artwork/Project Description

CALM is an attractive and user-friendly mental health application web design. It offers easy access to consultations with psychologists and psychiatrists. The website features a splash screen for registration or login. The home page has a serene design with soothing colors. The profile page allows personalization. The appointment page simplifies booking, and the online and onsite service pages provide convenient options for virtual or in-person sessions. CALM combines aesthetics and functionality for a visually appealing and user-centric experience.

Project 17 of 29

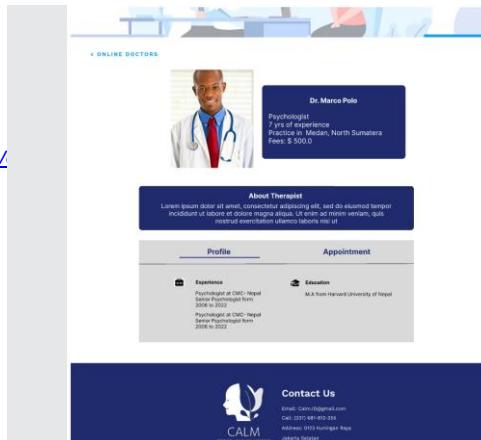


Figure 13 Onsite & Online Expertise Profile

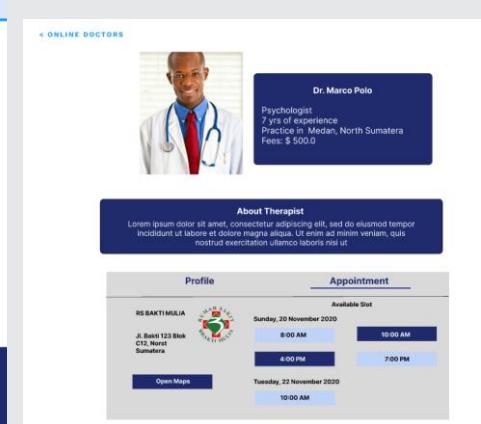


Figure 14 Onsite Appointment

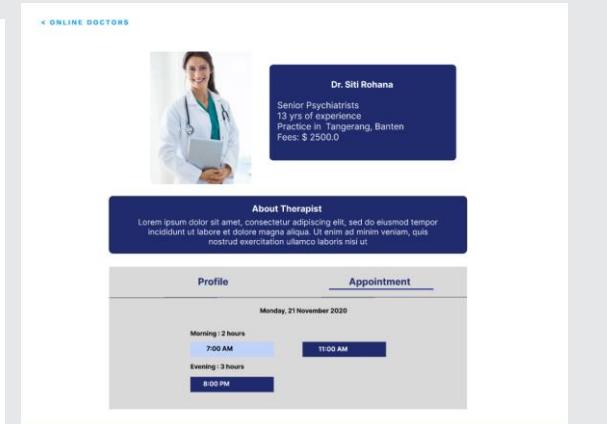


Figure 15 Online Appointment

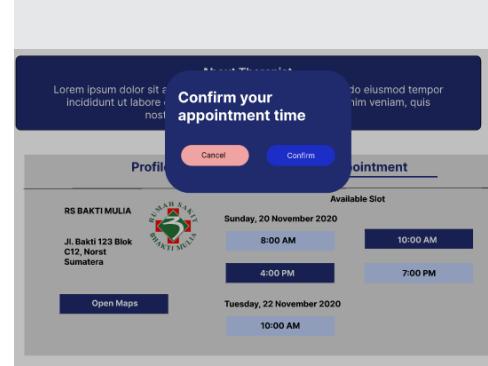


Figure 16 Confirmation

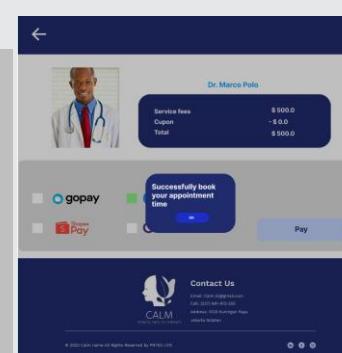


Figure 17 Payment

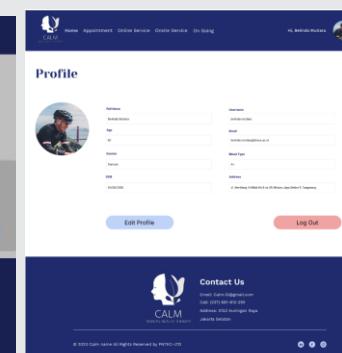


Figure 18 Profile Page



Figure 19 Article

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**  
SpaceTD Website Design  
**Year Accomplished**  
2023

**Role/Position**  
UI/UX Designer

**Publication Link**  
<https://www.figma.com/file/YMZ0eejdYURL>  
<https://drive.google.com/drive/folders/1NqG>

### Artwork/Project Description

For my final project lab, I took on the role of designer and developer to create a responsive website for SpaceTD, a rocket company. The primary focus of the project was to ensure an exceptional user interface and experience. I successfully translated the brand's core values into a captivating design that is easily accessible and navigable across various devices, including desktop and mobile. By incorporating interactive features and employing a clean layout, I significantly improved user satisfaction and retention on the website.

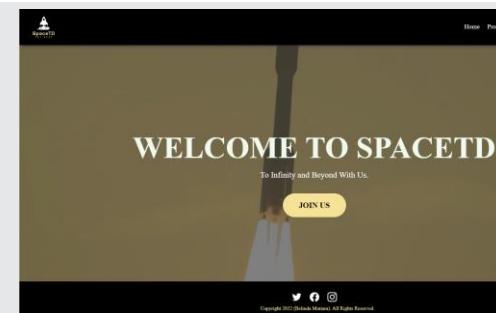


Figure 1 Home



Figure 2 Vision



Figure 3 Statistic Information



Figure 4 Vehicles Details

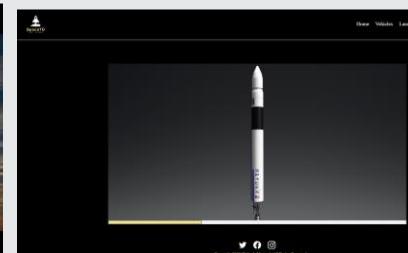


Figure 5 Each Vehicle's Details



Figure 6 Upcoming Launches



Figure 7 Latest Launches



Figure 8 Ddetails Latest Launches

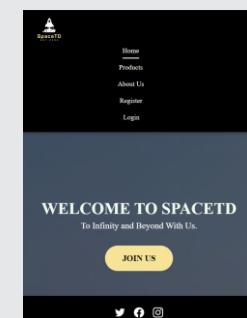


Figure 9 Responsive Navbar

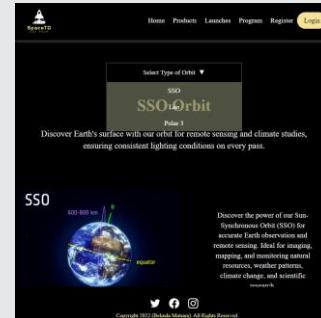


Figure 10 Program Page

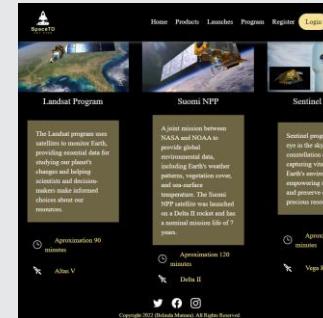


Figure 11 Program Detail

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title**  
Data Science Club BINUS

**Year Accomplished**  
2023

**Role/Position**  
Manager of Video Editing Division

**Publication Link**

#### Artwork/Project Description

As a Manager for the Video Editing Division at Data Science Club Bina Nusantara, I led video editing division and collaborated with Education Division to deliver high-quality results. Despite limited number of staffs, we implemented a collaborative design approach that resulted in efficient and high-quality outputs. Through this experience, I had the opportunity to develop my leadership skills, hard skills (Canva, Adobe Photoshop, Filmora), and time management so we can consistently delivering outstanding visual content across various platforms.

Project 19 of 20



Figure 1 Partnership Design

Figure 2 Video Based Learning May

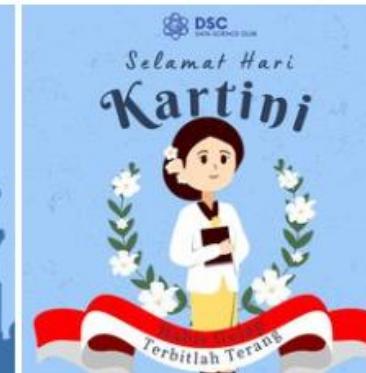


Figure 3 National Holiday Content

Figure 4 Lanyard Mockup



Figure 5 Content Design

Figure 6 Welcoming party merchandise

Figure 7 Poster

Figure 8 Video Based Learning April

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**Artwork/Project Title****BNMC 22<sup>nd</sup> Anniversary****Year Accomplished****2022****Role/Position****Coordinator of Design and Documentation Division****Publication Link****Artwork/Project Description**

As the coordinator of 2D team, I collaborated with four staff members to design the visual requirements for BNMC 22<sup>nd</sup> anniversary, themed 'The Lights of Gratitude Unlocks New Strength'. We raised the concept of "jar of gratitude". The idea behind this concept is to cultivate gratitude and appreciation for the positive things in someone's life.

*Challenge:* At first our team had limited experience using Adobe Photoshop and Illustrator.

*Solution:* Collaborated with senior team members to create a training program to enhance our design software skills. Additionally, we work together to assist each other in overcoming any obstacles that arise during the design process.



Figure 1 Bumper Main Power Point



Figure 2 Feeds Instagram (6 post)



Figure 3 Zoom Virtual Background



Figure 4 Family 100 Bumper Power Point



Figure 5 Games Rules Power Point



Figure 6 Family 100 Games Power Point

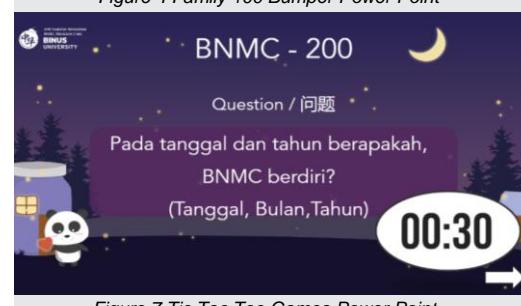


Figure 7 Tic Tac Toe Games Power Point



Figure 8 Birthday Wish Video



Figure 9 Little Dragon Thumbnail Video Edit

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Portfolio Submission for

**BINUS Internship Track  
2024**

**Artwork/Project Title****BNMC 22<sup>nd</sup> Anniversary****Year Accomplished****2022****Role/Position**

Coordinator of Design and Documentation Division

**Publication Link****Artwork/Project Description**

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**Challenge:** At first our team had limited experience using Adobe Photoshop and Illustrator.

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Figure 10 Poster



Figure 11 Paid Promote Poster



Figure 12 Merchandise 1



Figure 13 Merchandise 2



Figure 14 Invitation Card



Figure 15 Group Profile Picture



Figure 16 Sub-Group Profile Picture



Figure 17 Google Forms Header