Portofolio

Yosriko Rahmat Karoni Sabelekake

AI and Data Science Enthusiast

Website Version: yosriko.github.io

Portofolio

Yosriko Rahmat Karoni Sabelekake

AI and Data Science Enthusiast

Website Version: https://yosriko.github.io

About Me

Hello! I am Yosriko Rahmat Karoni Sabelekake, and called as Yosriko. I am a third-year student of Informatics in Duta Wacana Christian University. Currently I'm focusing my interest at the field of **Artificial Intelligence and Data Science.** As I have various experience through research, Lab. Assistant, Collaboratory project, and self project. At the present, I am focusing on finding higher opportunities in the tech industry through entry-level internship programs.

Professional Certificate

TensorFlow Developer Certificate

This certifies that

Yosriko Rahmat Karoni Sabelekake'

has passed the TensorFlow Developer Certificate exam covering foundational, practical machine learning skills through the building and training of models using TensorFlow.

Laurence Moroney
Head of TensorFlow Advocacy

Issue Date	Expiration Date	Certificate ID
03/27/2024	03/27/2027	99266293

TensorFlow

https://www.credential.net/c18b3d91-723a-452d-8643-368f07cfc04f#gs.90muny

Integrating machine learning into tools and applications. This certification program requires an understanding of TensorFlow model building using **Computer Vision, Convolutional Neural Networks, Natural Language Processing**, as well as **real-world data and image strategies.**

TEAM PROJECTS

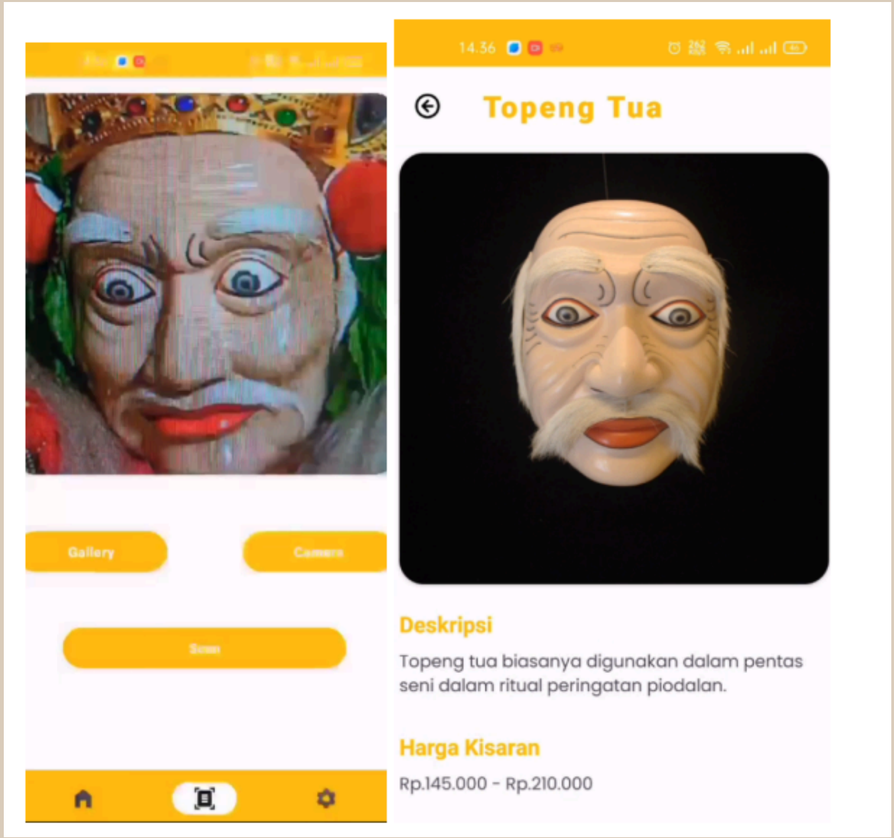
Bangkit Final Project - Kultura

AI Engineer

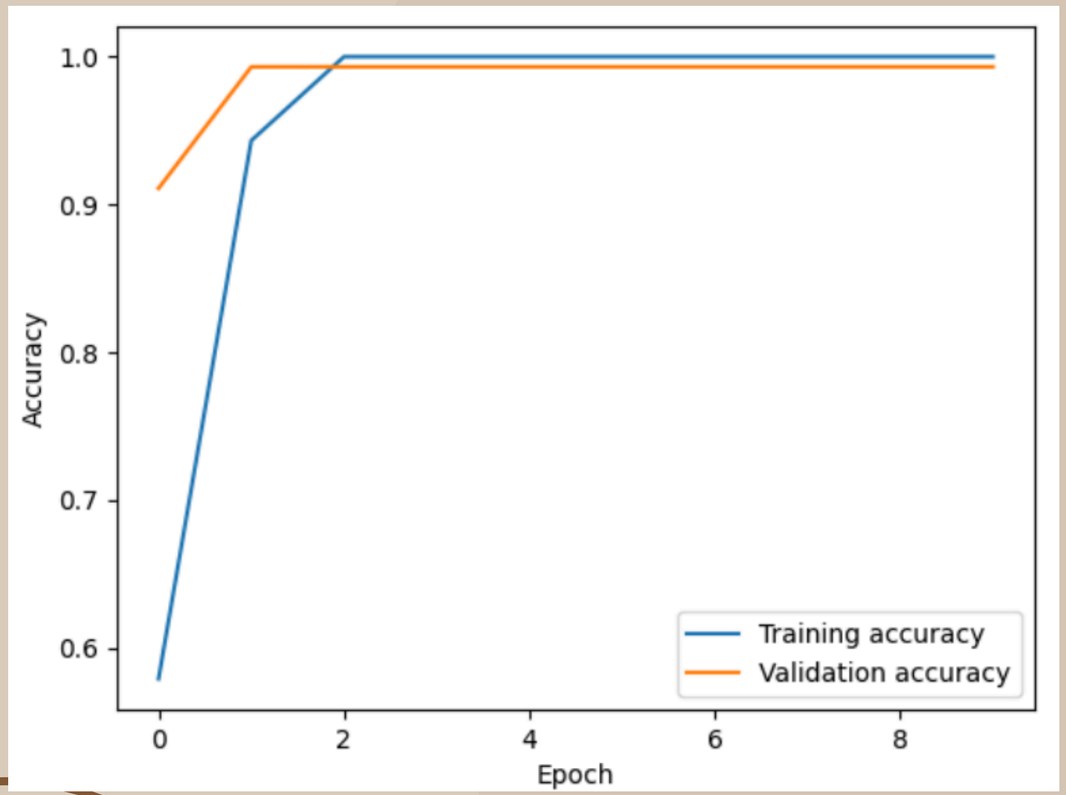
- Collect and preprocess data, including labeling cultural object data.
- Explore and apply deep learning techniques such as Convolutional Neural Networks (CNNs) or Transfer Learning.
- Develop and train CNN models using TensorFlow and combine with VGG16 pre-trained model
- Evaluate and test model accuracy
- Collaborate with Cloud and Android team to deploy the model

Bangkit Final Project - Kultura

Result in Application



Accuracy



Bangkit Final Project - Kultura

Confusion Matrix

```
2/2 [==============================] - 5s 1s/step
Confusion Matrix (Percentages):
[[1. 0. 0. 0. 0. 0. 0.]
 [0. 1. 0. 0. 0. 0. 0.]
 [0. 0. 1. 0. 0. 0. 0.]
 [0. 0. 0. 1. 0. 0. 0.]
 [0. 0. 0. 0. 1. 0. 0.]
 [0. 0. 0. 0. 0. 1. 0.]
 [0. 0. 0. 0. 0. 0. 1.]]
Classification Report:
```

The model is quite overfitting because of the lack of variation in the dataset and the limited number of datasets used. One possible solution is data augmentation, along with reducing the complexity of the model.

Multi-factor Authentication

Project is On-progress but my task ask AI Engineer that built Face Authentication part is already done

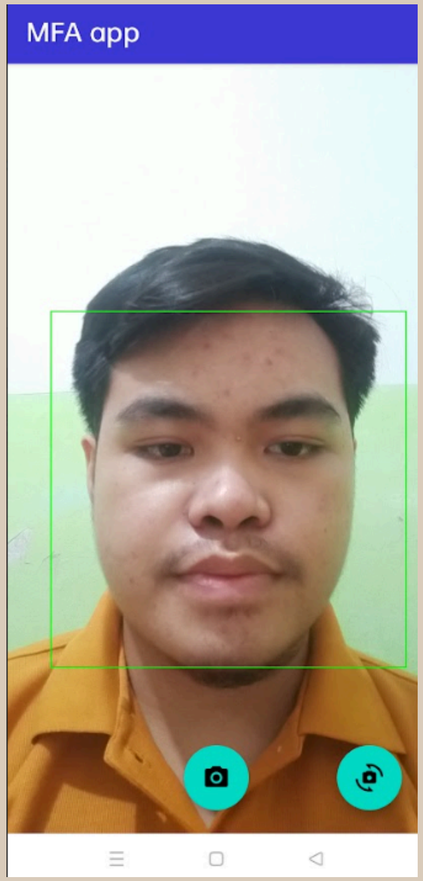
Face Recognition Flows:

- Save image embedding to firebase as FloatArray
- When doing attendance, user take photo. Face detect using MobileFaceNet model
- Taken photo convert to FloatArray
- Compare two embedding using Cosine Similarity

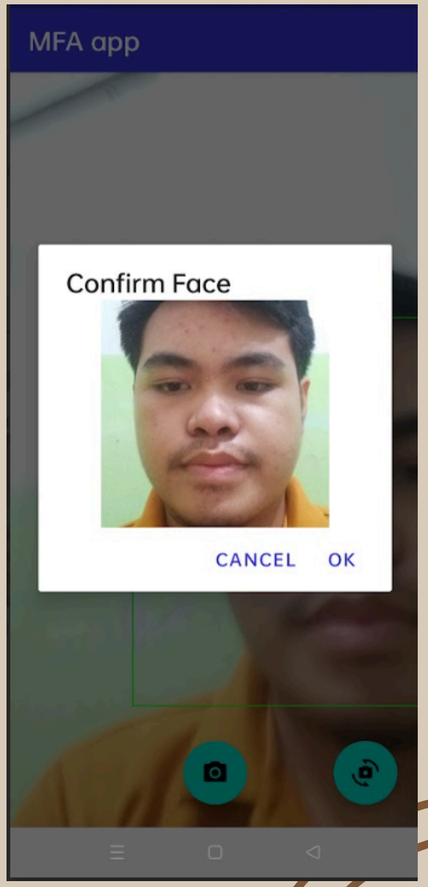
```
val faceEmbedings = PreferenceUtils.getFaceEmbeddings( context: this)
val embeddingArray = this.embedding.map { it.toFloat() }.toFloatArray()
val result = cosineSimilarity(faceEmbedings,embeddingArray)
binding.btnLoginTest.text = result.toString()
```

Multi-factor Authentication

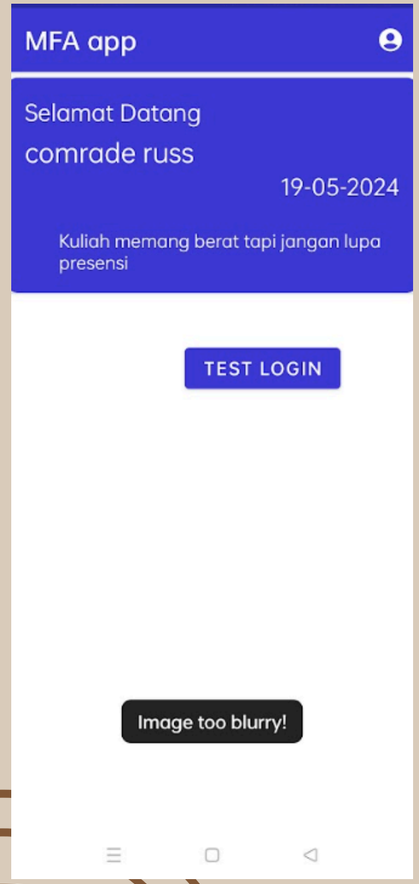
Image Take



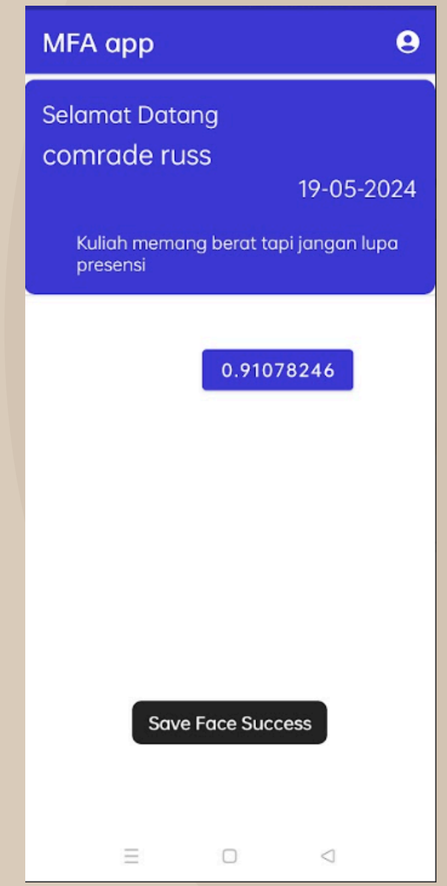
Confirmation



If image blurry



if success, will show similarity percentage



ChatMisi: Chatbot for the Admissions and Promotions Unit

Description

Chatmisi is a chatbot designed to assist the **Admissions and Promotion Unit** in answering questions from prospective students regarding admissions and other administrative matters. It **operates outside of office hours**, eliminating the need to visit the Admissions and Promotion Unit office.

The chatbot uses a **Production System** as its **knowledge representation** method, implementing a set of rules to answer questions related to admissions activities. These rules are derived from the history of **frequently asked questions** directed to the UKDW Admissions Unit.

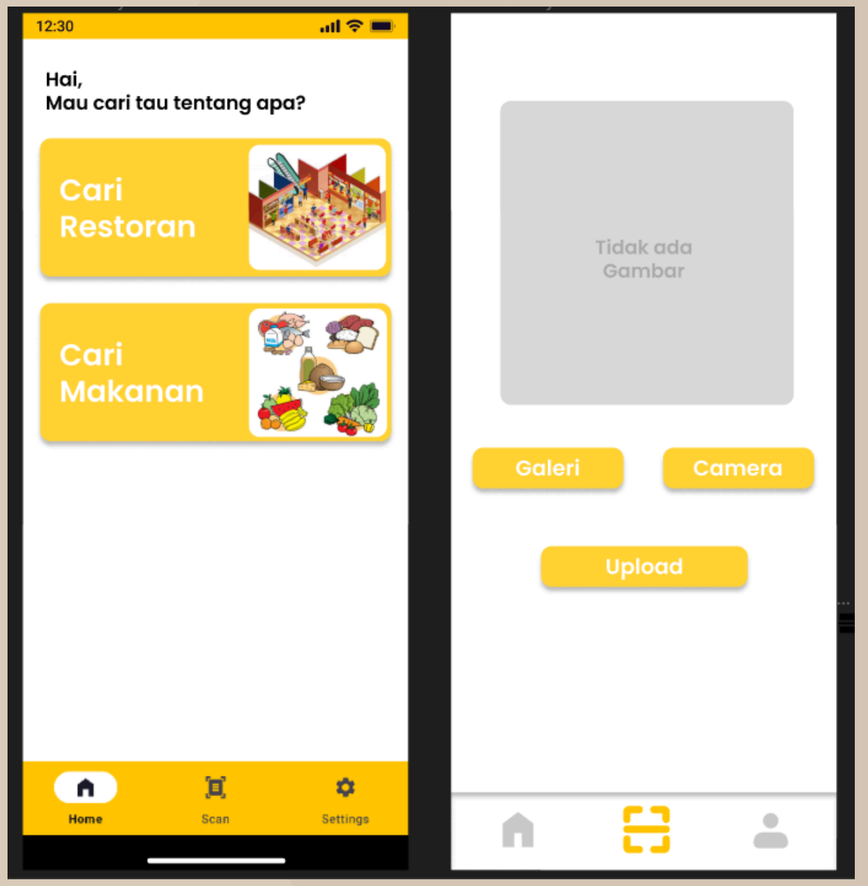
```
"C:\Yosriko\SEMESTER 4\Kecerdasan Buatan\.venv\Scripts\python.exe" "C:\Yosriko\SEMESTER
Halo, selamat datang di Chatmisi! Ada yang bisa saya bantu? Kapan jadwal pendaftaran UK
UKDW memiliki tiga jalur seleksi yang dapat Anda pilih:
1. Jalur Prestasi
yaitu, Seleksi Penerimaan Mahasiswa Baru berdasarkan nilai Rapor, berlaku untuk program
2. Jalur Mandiri
yaitu, Seleksi Penerimaan Mahasiswa Baru berdasarkan pada nilai rapor diluar skema Sele
3. Jalur Reguler
yaitu, Seleksi Penerimaan Mahasiswa Baru berbasis tes untuk prodi Kedokteran, Filsafat
Silakan masukkan jalur seleksi yang Anda minati: Prestasi
16 - 30 September 2022 dan 1 - 28 Oktober 2022 (Tahap 1)
1 - 25 November 2022 dan 1 Desember 2022 - 27 Januari 2023 (Tahap 2)
 1 - 24 Februari 2023 dan 1 - 31 Maret 2023 (Tahap 3)
Ada lagi yang ingin Anda tanyakan? (enter 'q' to quit)
```

FastMenu: : AI based Food Android Application

Description

FastMenu is an AI-powered Android application designed to enhance the dining experience by utilizing advanced object detection and food classification technologies. Currently, the object detection model, which can identify multiple food items in real-time, has been completed but not yet deployed. The focus is now on developing a robust food classification model to accurately categorize detected food items using mobile net model.

Prototype



PERSONAL PROJECTS

Bali Mask Classification

```python
def extract_features(img_path):
    img = io.imread(img_path)
    img = color.rgb2gray(img)
    hog_features = feature.hog(img, orientations=9, pixels_per_cell=(8, 8), cells_per_block=(2, 2))
    return hog_features

def load_data(dataset_path):
    data = []
    labels = []
    label_encoder = LabelEncoder()
    for class_folder in os.listdir(dataset_path):
        class_path = os.path.join(dataset_path, class_folder)
        for img_file in os.listdir(class_path):
            img_path = os.path.join(class_path, img_file)
            features = extract_features(img_path)
            data.append(features)
            labels.append(class_folder)

    encoded_labels = label_encoder.fit_transform(labels)
    return np.array(data), np.array(encoded_labels)
```

Description: Reference from KULTURA project, but using Machine Learning model

Dataset:

7 Classes of Bali mask that total have 352 image

Model: SVM

Result: Able to classify Bali masks with over 85% accuracy

```python
# Train SVM model
clf = svm.SVC(kernel='rbf', C=1)
clf.fit(X_train, y_train)
```

```
"C:\Yosriko\BANGKIT BATCH 5 - Machine Learning\Capstone\Kul
Accuracy on the validation set: 0.8873239436619719
```

Data-driven suggestions for HR

Tools: Pandas, Seaborn, Matplotlib, TensorFlow
Description: This capstone project for the Advanced Data Analytics course involves a comprehensive analysis of a dataset and the development of predictive models aimed at providing valuable insights to the Human Resources (HR) department of a large consulting firm.
Result: Able to see statistics, correlation and interaction between variable, gain 83% model accuracy

Classification Report:

	precision	recall	f1-score	support
0	0.83	1.00	0.91	1998
1	0.00	0.00	0.00	401
accuracy			0.83	2399
macro avg	0.42	0.50	0.45	2399
weighted avg	0.69	0.83	0.76	2399

	satisfaction_level	last_evaluation	number_project	average_montly_hours	time_spend_company	Work_accident	left	promotion_last_5years
count	14999.000000	14999.000000	14999.000000	14999.000000	14999.000000	14999.000000	14999.000000	14999.000000
mean	0.612834	0.716102	3.803054	201.050337	3.498233	0.144610	0.238083	0.021268
std	0.248631	0.171169	1.232592	49.943099	1.460136	0.351719	0.425924	0.144281
min	0.090000	0.360000	2.000000	96.000000	2.000000	0.000000	0.000000	0.000000
25%	0.440000	0.560000	3.000000	156.000000	3.000000	0.000000	0.000000	0.000000
50%	0.640000	0.720000	4.000000	200.000000	3.000000	0.000000	0.000000	0.000000
75%	0.820000	0.870000	5.000000	245.000000	4.000000	0.000000	0.000000	0.000000
max	1.000000	1.000000	7.000000	310.000000	10.000000	1.000000	1.000000	1.000000

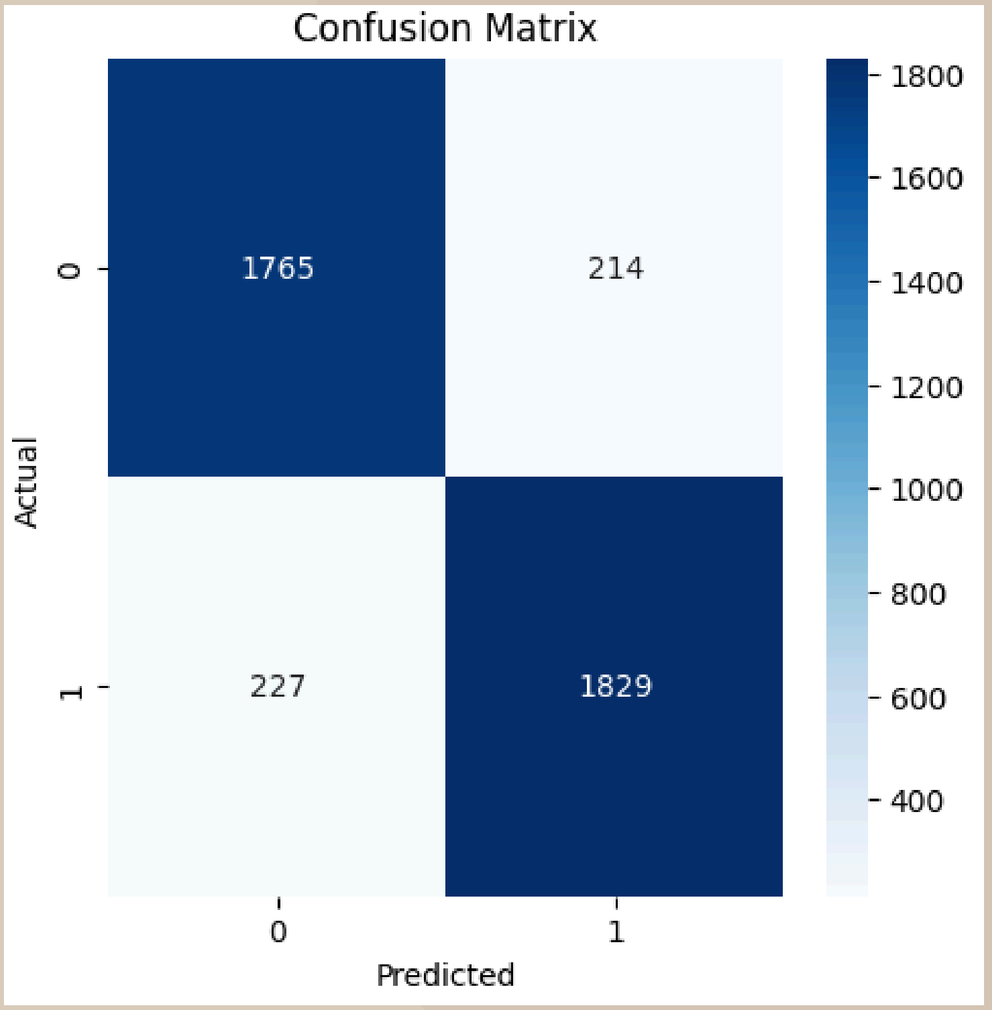
Fake News Detection

Tools: TensorFlow, Scikit-learn, numpy, pandas, matplotlib

Description: Utilizing natural language processing (NLP) techniques, we categorize news articles based on their textual content to determine whether they are authentic or fabricated.

Result: Achieve Validation Accuracy over 89%, tested using test dataset and confusion matrix

	text	label
0	dark agenda behind globalism open border altma...	0
1	america poor still get shaft sami jamil jadall...	0
2	number accuser grow former miss finland accuse...	0
3	heroic prego advertisement replaces refresh we...	0
4	russia syria debbie reynolds thursday even bri...	1
...	...	...
16641	comment cost selfdriving taxi really sixtyseve...	0
16642	interest duterte get billion china get money j...	0
16643	forget encyclopaedia get pokiespedia home win ...	0
16644	u election race huma abedin connection minute ...	0
16645	shameful obama legacy white man beat viciously...	0

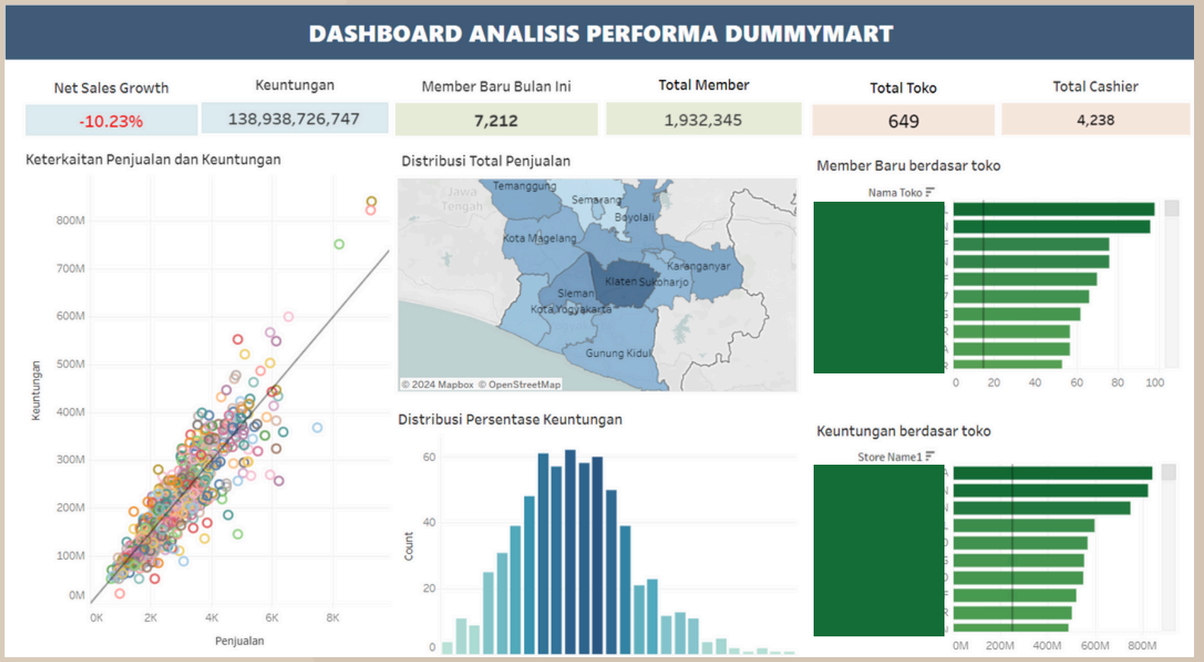


DummyMarket Performance Analysis

Tools: Excel, Tableau

Description: The Analytics Dashboard provides an at-a-glance view of the company's performance. This dashboard uses two metrics: net sales and new memberships. Managers use this dashboard to analyze performance and make informed decisions regarding promotions, improvements, human resources, and other actions. Please note that the data used in this dashboard is dummy data generated by AI.

Result: Give insight about relation between transaction and net sales, also performance in a month



OTHER PROJECTS

https://yosriko.github.io#projects

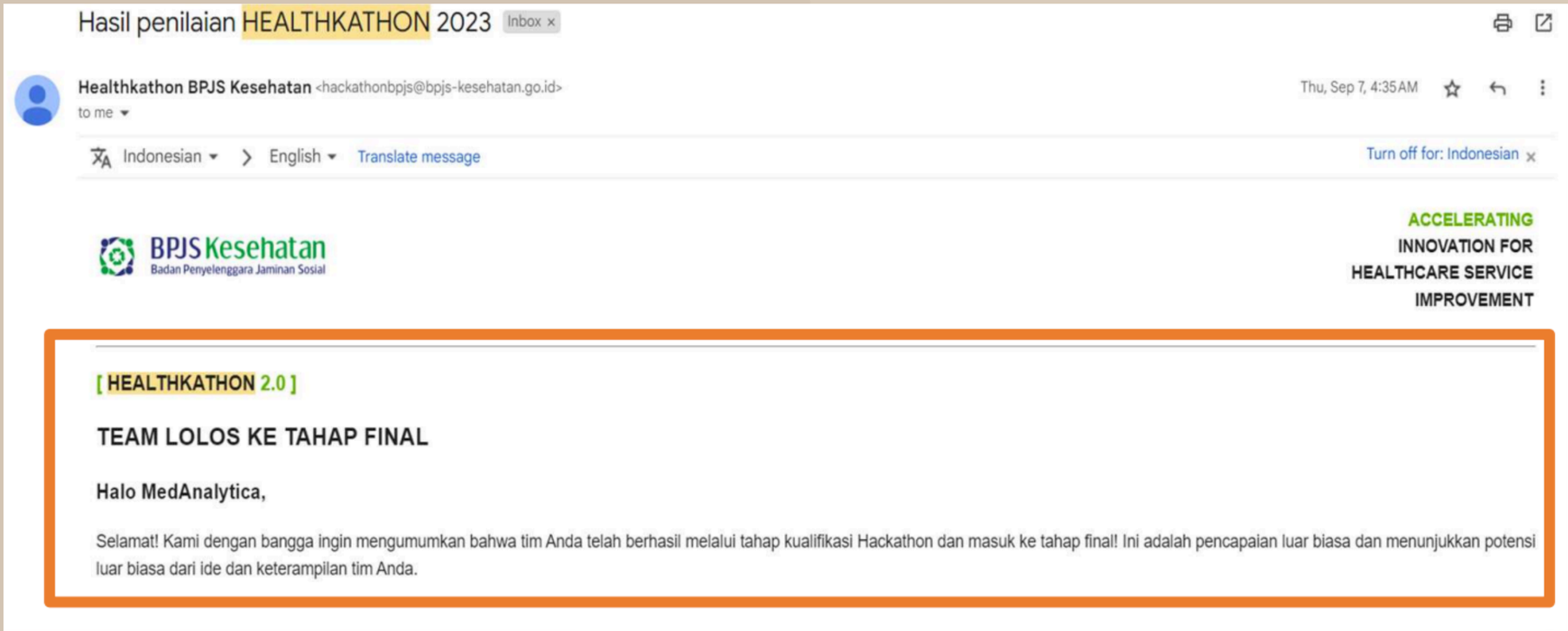
Courses Certificate

- **DeepLearning.AI TensorFlow Developer Specialization**
  Credential
- **Mathematics for Machine Learning and Data Science Specialization**
  Credential
- **Google Data Analytics Specialization**
  Credential
- **Machine Learning Specialization**
  Credential

Complete Course List: https://yosriko.github.io/#experience

Achievement

Description: I served as the Team Lead for the Healthkathon: Data Analytics and Visualization competition, where my team ranked 24th out of 569 teams. Our dashboard created in Power BI and focused on analyzing the correlation between Tuberculosis and Diabetes Mellitus, using sample data from BPJS Kesehatan. Our efforts culminated in a final presentation, which can be viewed here: https://www.youtube.com/watch?v=sL_AiTgW90k



Hasil penilaian HEALTHKATHON 2023 Inbox ×

Healthkathon BPJS Kesehatan <hackathonbpjs@bpjs-kesehatan.go.id>
to me

Thu, Sep 7, 4:35 AM

Indonesian › English Translate message

Turn off for: Indonesian ×

BPJS Kesehatan
Badan Penyelenggara Jaminan Sosial

ACCELERATING
INNOVATION FOR
HEALTHCARE SERVICE
IMPROVEMENT

[HEALTHKATHON 2.0]

TEAM LOLOS KE TAHAP FINAL

Halo MedAnalytica,

Selamat! Kami dengan bangga ingin mengumumkan bahwa tim Anda telah berhasil melalui tahap kualifikasi Hackathon dan masuk ke tahap final! Ini adalah pencapaian luar biasa dan menunjukkan potensi luar biasa dari ide dan keterampilan tim Anda.

Soft Skills English

TBI
The British Institute
TBI-DAGO/CORP/2522

bangkit
Google goto traveloka

This is to certify that

Yosriko Rahmat Karoni Sabelekake

has completed a short course of **4.5** hours
entitled

English for Business Communication

and achieved an overall score of **100%**

18 January 2024

TBI
TBI School Manager