Capstone Final Project

GUVI Final project

Using Python scripting, Data Preprocessing, EDA, Streamlit, OCR, Image Processing and NLP

GUVI

Rajaguru Irusan

Project Overview

The objective of this project is to predict whether an e-commerce visitor will convert into a customer. Understand OCR, Image Processing, NLP and Product Recommendations.

Data-Driven Insights: Analyzing and preprocessing historical data and train the model for improved predictions.

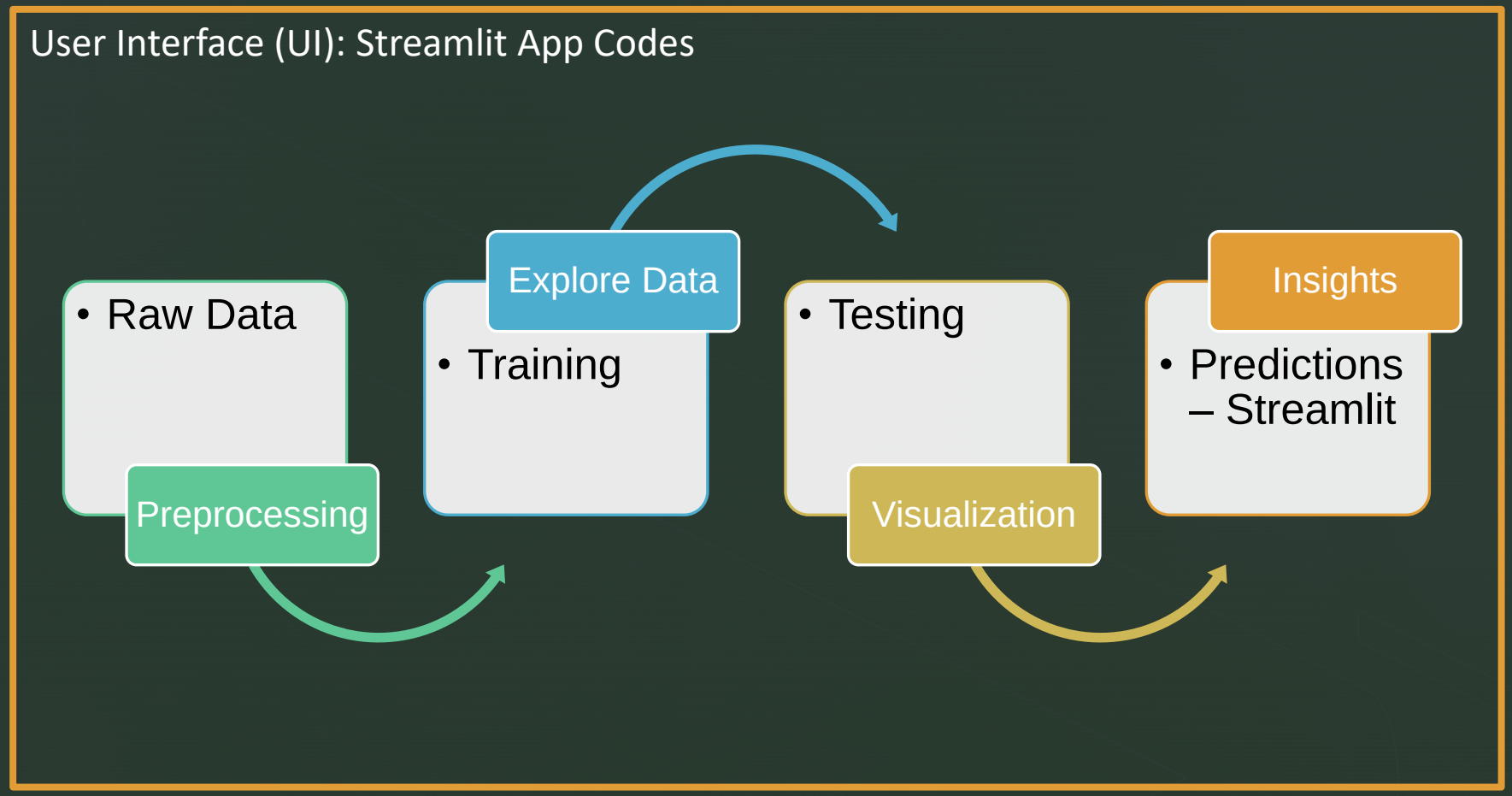
ML Model: Predicting the lead conversion using Random Forest, Logistic Regression and SVM models.

Classification Model: Classifying leads into “Converted" or “Not converted" categories using count of session, clicks and device category.

Streamlit Application: Developing an interactive web-based application for real-time prediction and decision-making, providing a user-friendly interface for entering input features and obtaining actionable predictions.

Streamlined Workflows: Incorporating data preprocessing, feature engineering, and visualization techniques to ensure robust model performance and accurate predictions.

Project Workflow for Prediction



System Requirements

- Visual Studio Code Version: 1.85.1 or later
- ML libraries
- Streamlit App

Note: Install or register the above tools to execute the project.

PIP Installations

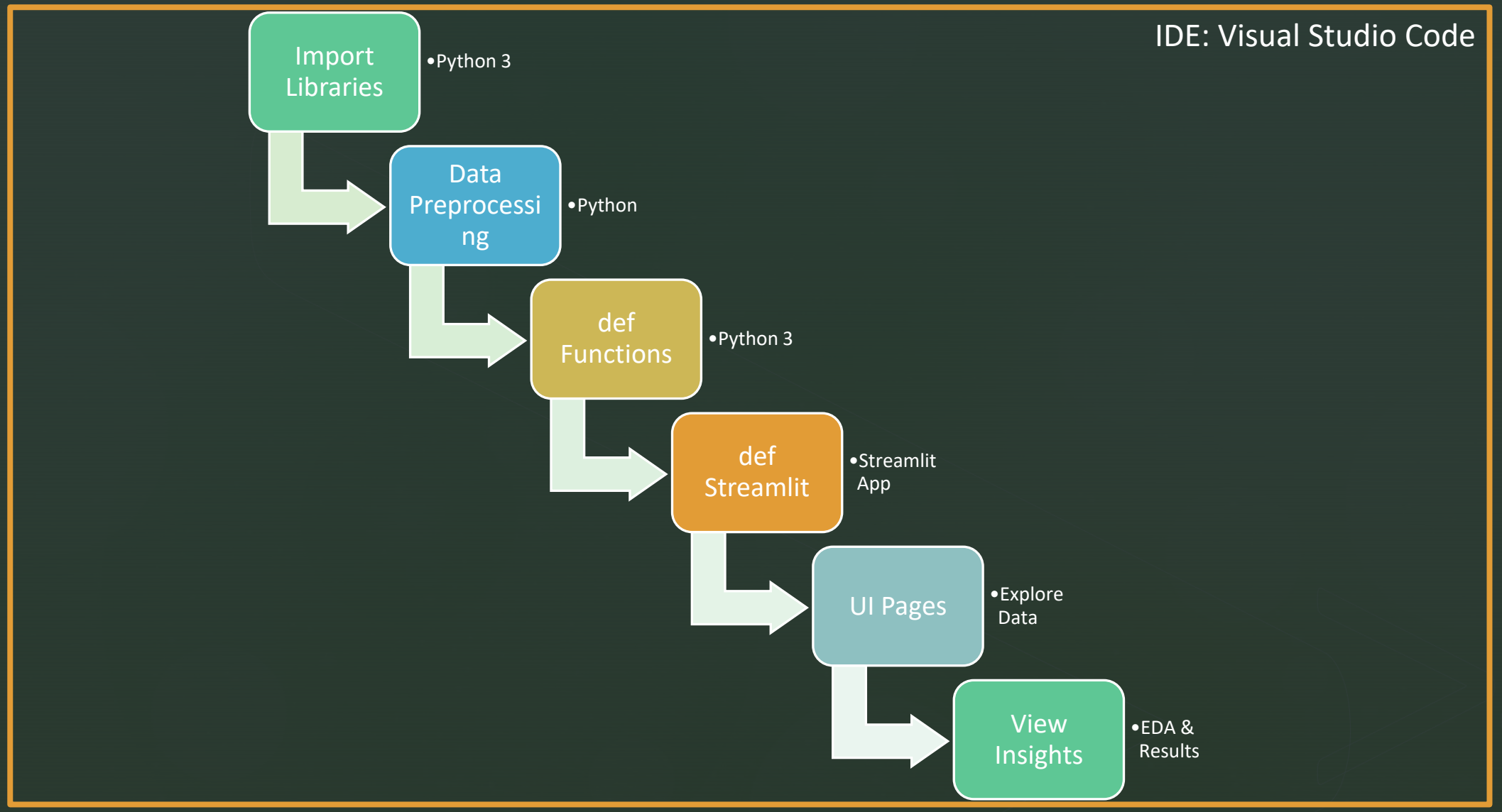
- pip install pandas
- pip install streamlit
- pip install streamlit-option-menu
- pip install notebook
- pip install scikit-learn
- pip install matplotlib
- pip install seaborn
- pip install openpyxl
- pip install joblib

Note: Install the above pip in respective IDE terminal (Eg: VS Code terminal or Run in cmd for Windows)

Coding References

- GITHUB Repositories
- Guvi Classes
- Streamlit Documentation

Coding Flow for Prediction



Annexure: Screenshots

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Deploy

GUVI Final Project : Classification | Prediction - IRG

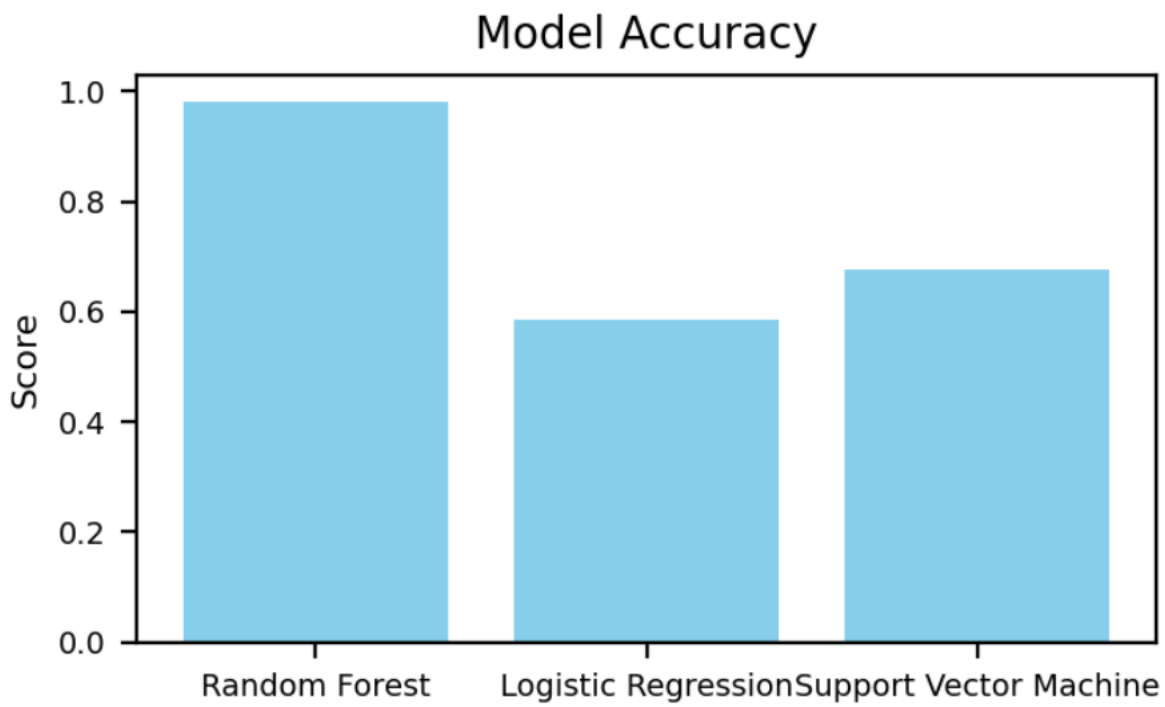
EDA | Model Comparison | Live Prediction

Model Comparison

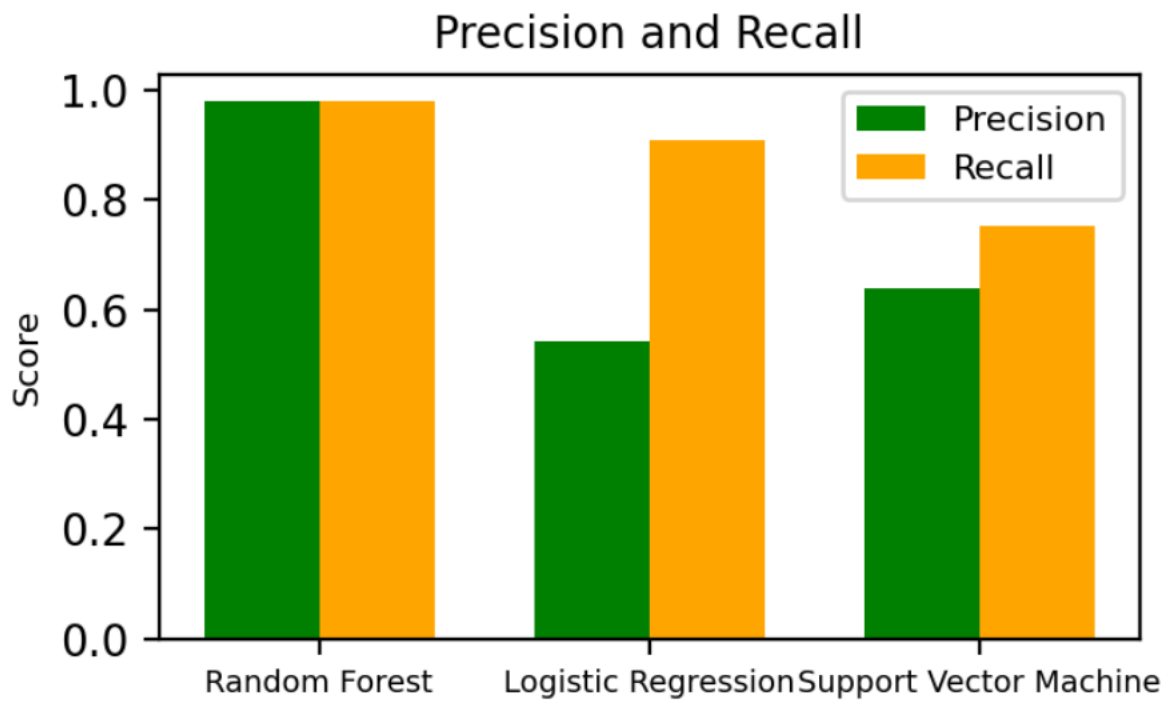
	Precision	Recall	F1-Score	Accuracy
Random Forest	0.9807	0.9807	0.9807	0.9814
Logistic Regression	0.5416	0.908	0.6787	0.5865
Support Vector Machine	0.5376	0.7537	0.6909	0.6757

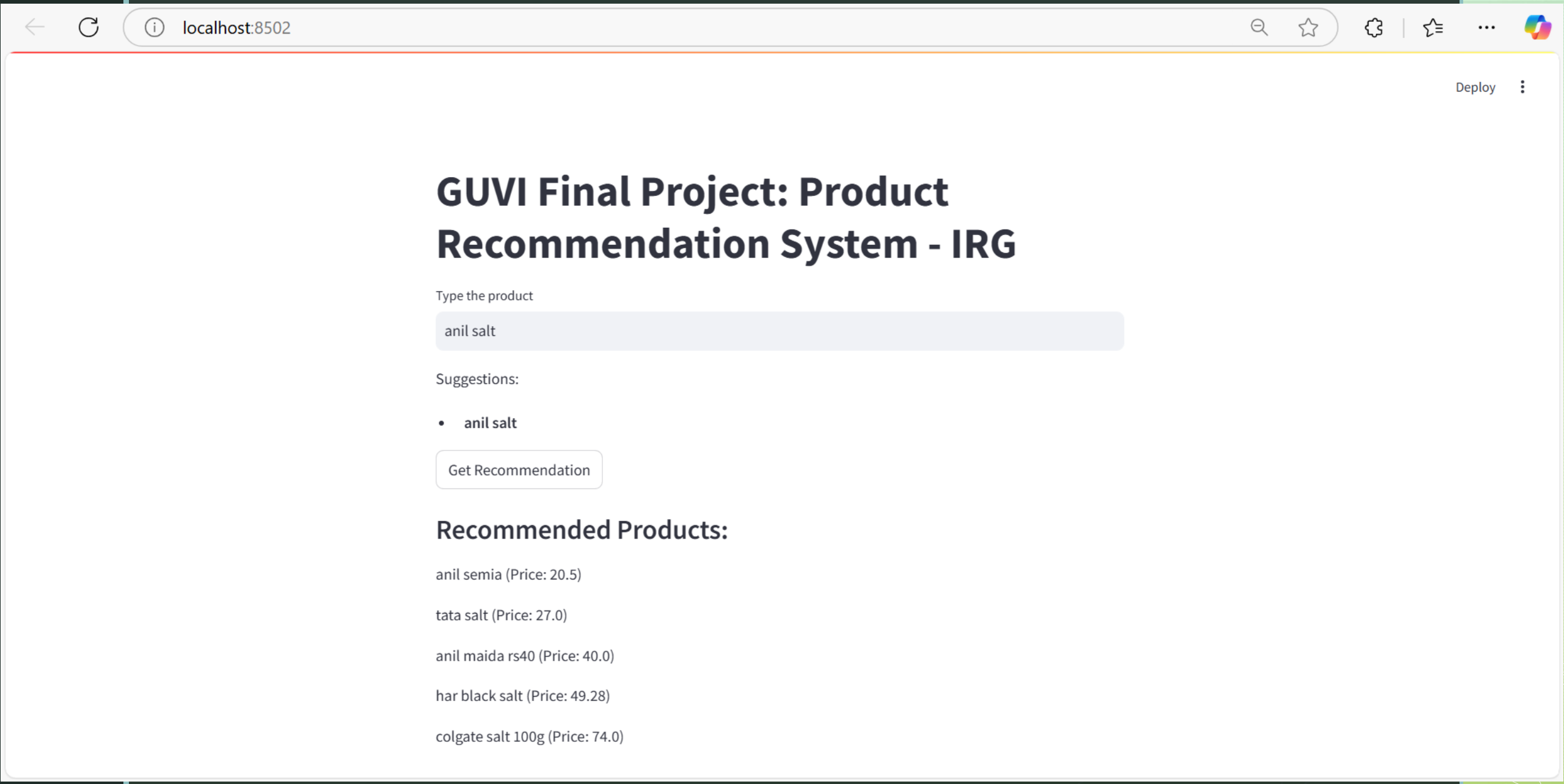
Model Metrics Visualization

Model Accuracy



Precision and Recall Comparison

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GUVI Final Project: Product Recommendation System - IRG
Type the product
anil salt
Suggestions:
anil salt
Get Recommendation
Recommended Products:
anil semia (Price: 20.5)
tata salt (Price: 27.0)
anil maida rs40 (Price: 40.0)
har black salt (Price: 49.28)
colgate salt 100g (Price: 74.0)

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GUVI Final Project: NLP Analysis - IRG

Enter your text here:

Input Texts

get 25W of fast charging using the MagSafe puck, and 15W with a Qi2 certified charger.

Again, for the fan of the stats, the Apple iPhone 16 in our test, lasted around 18 hours in our 4K video loop test and reported fairly minimal drops in battery in our gaming and GPS navigation tests.

In real world, this translates to about one and a half days of power if you are a light user, mostly texting on your phone and in a good cellular and WiFi reception area. If you are a power user, shooting, editing and gaming on your iPhone 16, then you might be able to squeeze out about 7-8 hours of battery with some power management.

Analyze

Stemming

verdict so should you buy the appl iphon 16 the answer is ye and no ye for the folk who are look for the latest and greatest iphon in their pocket which perform better than what they would need in the real world and it is also a capabl camera and content creation tool the camera app ha a set of new featur that

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GUVI Final Project: Image OCR and Preprocessing - IRG

Upload an Image

Drag and drop file here

Limit 200MB per file • JPG, JPEG, PNG

Browse files

Acer_Wallpaper_03_3840x2400.jpg 3.3MB

Thank You!!!