



 ARTIFICIAL INTELLEGENCE

SENTIMENT ANALYSIS FOR SOCIAL MEDIA POST



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AGENDA

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INTRODUCTION

Sentiment refers to the overall emotional tone or attitude conveyed in a piece of text, speech, or communication, which expressed opinion, idea, or statement is positive, negative, or neutral.

Reviews, likes, and comments on the internet are increasing their importance in the evaluation of products and services by potential customers.

Our goal is to develop a sentiment analysis model that is both accurate and efficient in classifying and understanding sentiments collected from a variety of social media platforms.

INTRODUCTION

Sentiment Analysis



Positive

“Great food for an affordable price.
We will definitely be visiting again”



Neutral

“Food was good”



Negative

“Horrible services. The food taste really bad.
Not worth the money”

PROBLEM STATEMENT

Traditional methods of sentiment analysis are often time-consuming and lack the ability to capture emotions.

Therefore, there is a need for automated sentiment analysis tools that can process textual data swiftly and accurately, enabling users to understand public opinion, customer feedback, and emotional trends in various contexts.

PROBLEM STATEMENT

There are some key components we recommended to solve this problem

1. Model and Training

- a. Logistic Regression
- b. NLTK

2. Application

- a. Developing Python FastAPI Web API
- b. Mobile App for writing a post comments
- c. API Integration and Algorithms Training
- d. Sentiment Analysis Visualization Report

FRAMEWORK

 FastAPI

 Flutter

METHODOLOGY

Data Collection: Sentiment analysis of social media posts, we collected data from Twitter.

Data Preprocessing: Clean the raw social media posts and prepare them for the sentiment analysis model, ensuring that the text is in a format that can be easily processed and analyzed.

METHODOLOGY

Feature Extraction: We use WordNetLemmatizer for lemmatization and remove the stopwords. **For example**, the verb "running" would be identified as "run."

Model Architecture: Using a NLTK and Logistic Regression

METHODOLOGY

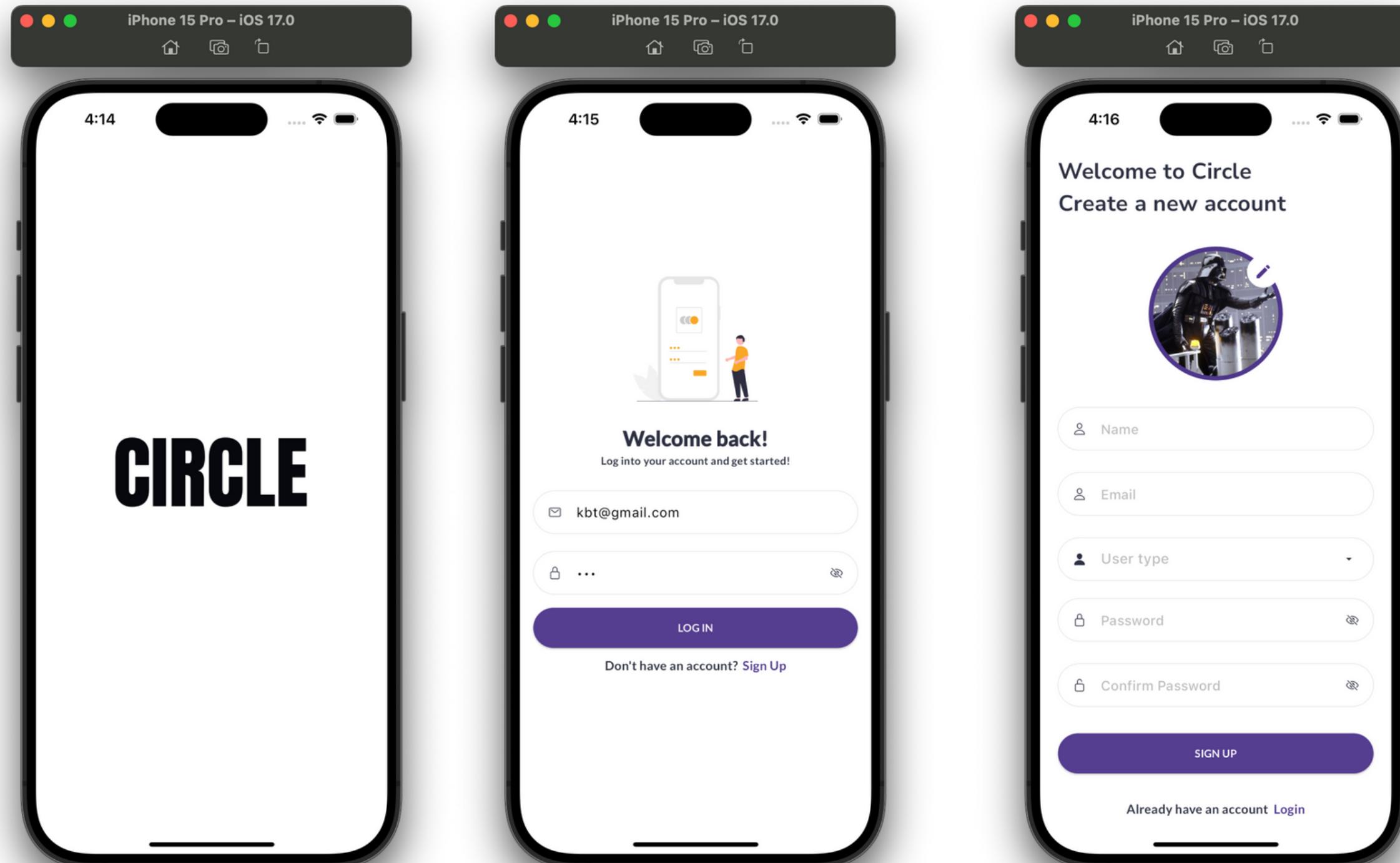
Model Training: Split the preprocessed data into training, validation, and test sets.

Evaluation: Train the model on the training set, evaluated the final model on the test set to measure its generalization performance. Applying evaluation measures accuracy.

USE CASE

Mobile App

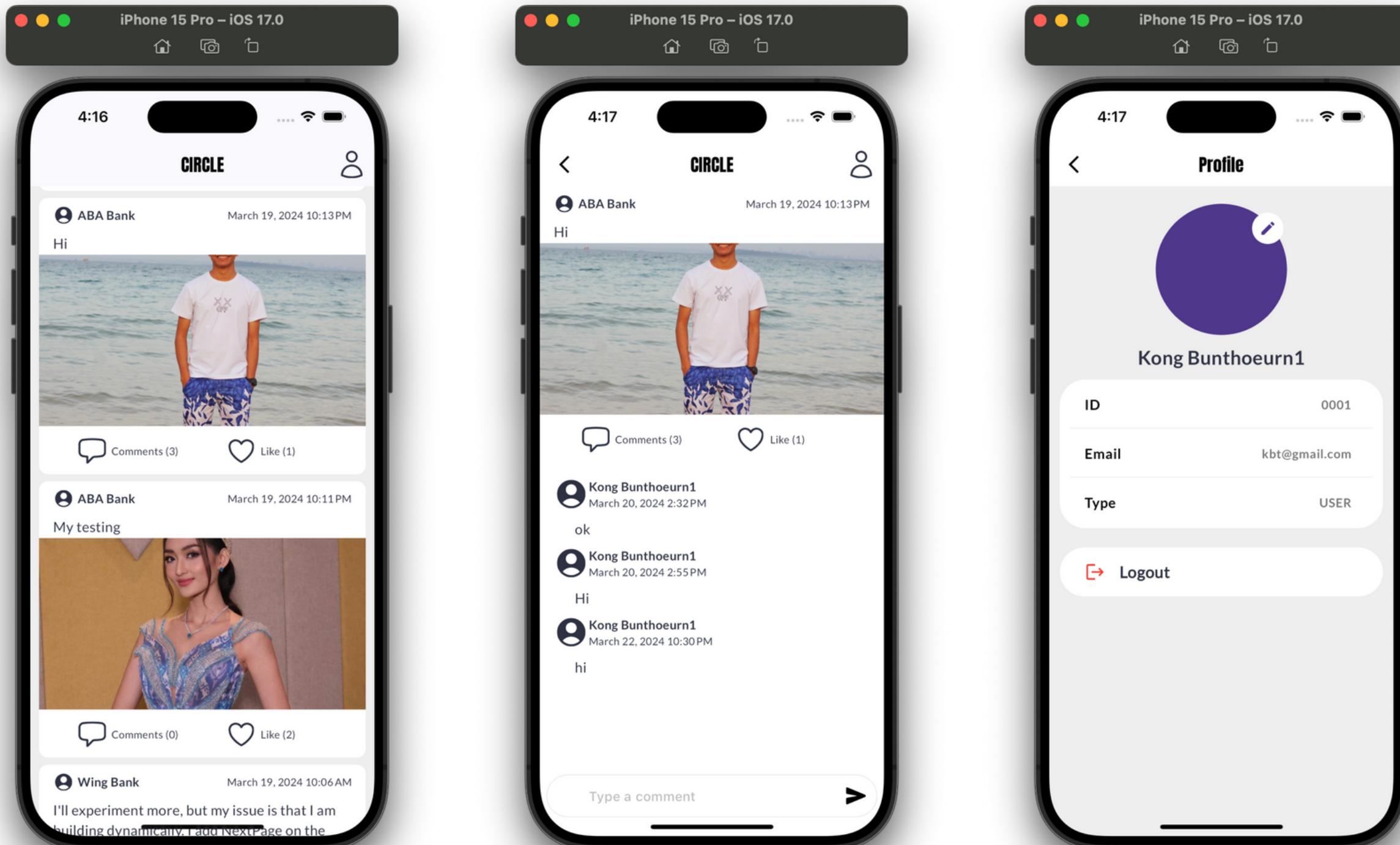
Login and Register
as a Normal user



USE CASE

Mobile App

Home Page and Profile Page

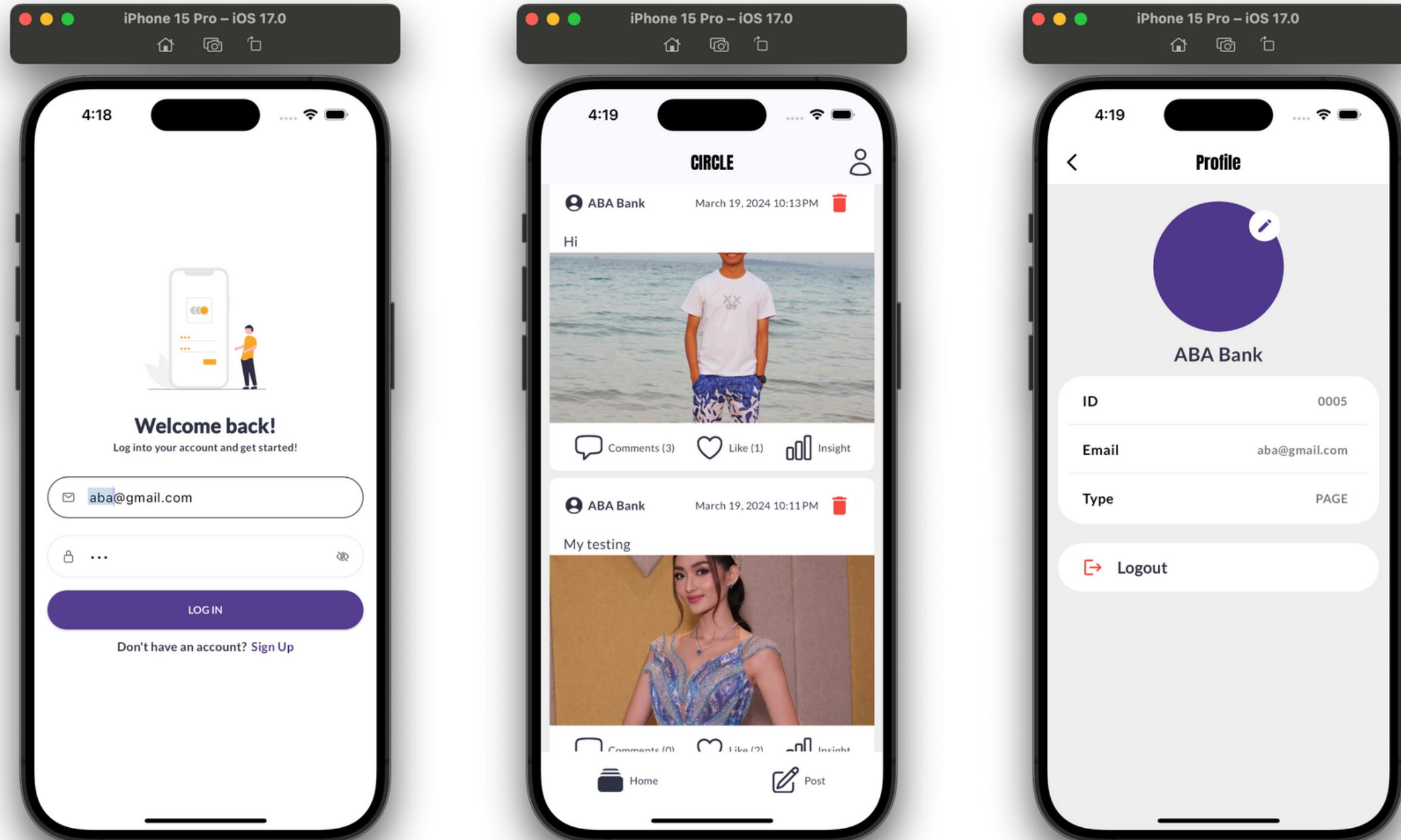


USE CASE

Mobile App

User as Page

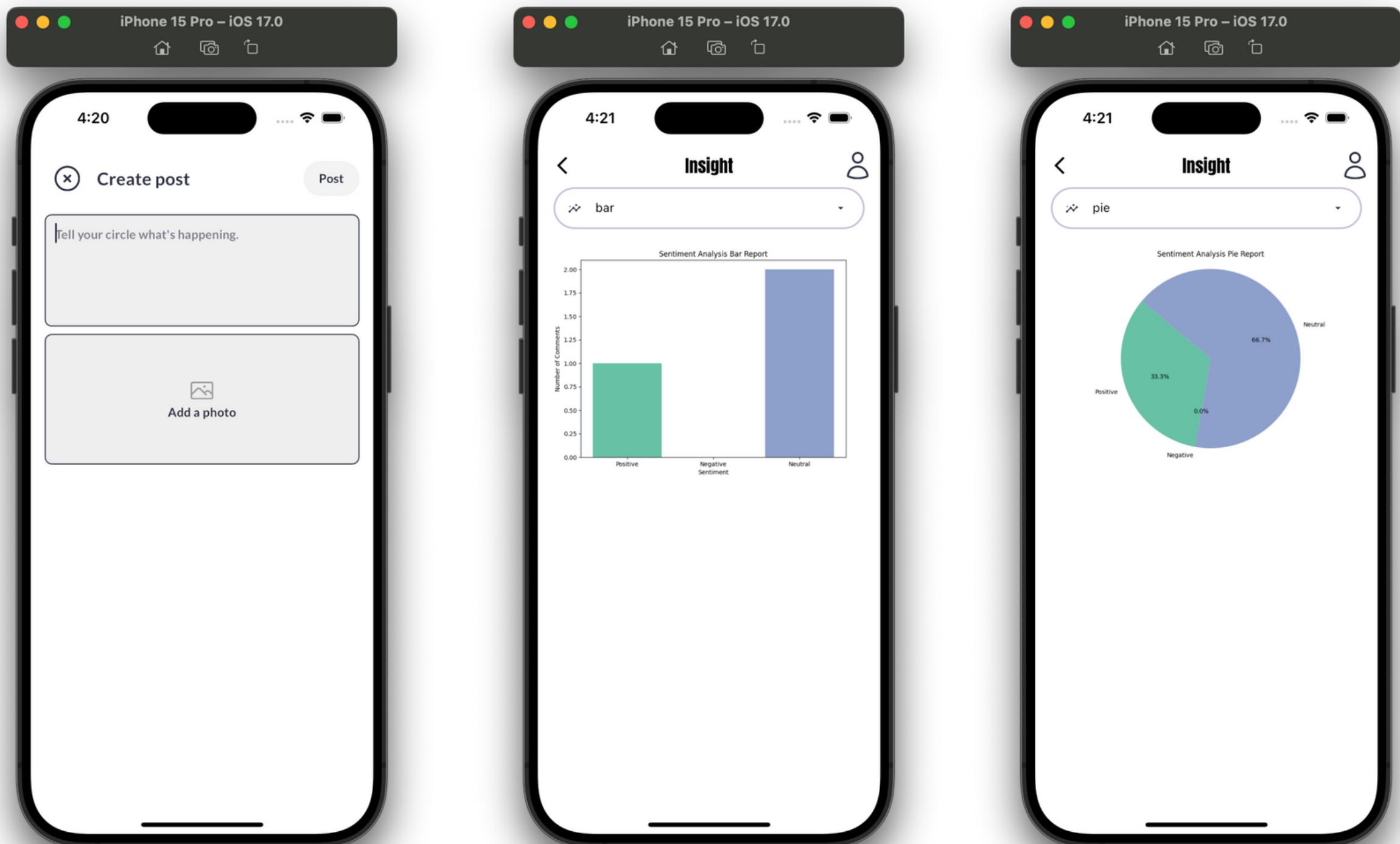
The page allows users to publish new blogs and view insight reports.



USE CASE

Mobile App

View insight reports,
including bar and
overtime charts.



CHALLENGE AND IMPROVEMENT

CHALLENGE

- Dataset still have some limitation

IMPROVEMENT

- Enhancing the Model to Identify **Violations Post**
- **Audio or video-based** sentiment analysis
- Develop a comprehensive end-user application

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DEMO

THANK YOU