

DS565 - Generative AI-Driven Intelligent Apps Development

Project: Customer Support System: An email to the customer

Course: DS565

Professor: Dr. Henry Chang

Presented by: Karan Shrestha (20087)

Introduction

- This project implements a Flask-based web application that uses OpenAI GPT-3.5-turbo to generate customer comments, email subjects, perform sentiment analysis, and generate a final email content.
- Users input product descriptions and receive emails based on the inputs.

Project Structure

- The project consists of the following files and folders:
- app.py: Main Flask application file
- config.py: Configuration settings
- .env: Environment variables
- static/, templates/: Static files and HTML templates

Prerequisites

- Python 3.8+
- Flask
- OpenAI Python SDK
- Flask-Mail
- python-dotenv

Additionally, you need an OpenAI API key and SMTP credentials for email.

Setup and Configuration

Environment Variables and Configuration:

- OPENAI_API_KEY: OpenAI key in .env file
- MAIL_USERNAME, MAIL_PASSWORD: Email credentials in .env file

OpenAI API Integration

- The OpenAI API is used to:
 - Generate customer comments
 - Create email subjects
 - Perform sentiment analysis
 - Generate the final email content

Execution Flow

- 1. User submits product description & email
- 2. Comment generated by OpenAI
- 3. Subject & sentiment analysis
- 4. Final email is generated and sent

Code Snippets

- Functions:
- • `generate_comment(product_description)`
- • `generate_subject(comment)`
- • `analyze_sentiment(comment)`
- • `generate_email_content(comment, sentiment, subject)`



Customer Service Assistant

Language:

English



Customer Email:

Enter your email here...

Customer Comments:

Enter the product comments here...



Generated Email Response:



Generate Response

Language:

English

Customer Email:

ks.karanshrestha@gmail.com

Customer Comments:

The headphones is good with bluetooth and wire connection. Sound quality was awesome.

Generated Email Response:

Subject: Customer Review: Versatile and High-Quality Headphones

Dear Customer,

Thank you for sharing your feedback on the headphones you purchased from us. We are thrilled to hear about your positive experience with our product.

Based on your detailed comment, it is evident that the headphones offer a fantastic blend of versatility and quality. The dual functionality of both Bluetooth and wired connections provides you with the flexibility to choose your preferred mode of listening, enhancing your overall user experience.

We are delighted that you found the sound quality to be commendable, with crisp highs, rich mids, and powerful bass, delivering an immersive and enjoyable audio experience. Whether you opt for the convenience of wireless connectivity or the reliability of a wired connection, our headphones are designed to provide exceptional performance across the board.

Your satisfaction with the functionality and audio excellence of our headphones is greatly appreciated. It is feedback like yours that motivates us to continue delivering high-quality products to our valued customers.

If you have any further questions or require assistance, please do not hesitate to reach out to us. We are here to ensure your continued satisfaction with our products.

With Regards,
The Support Team

Generate Response

Customer Review: Versatile and High-Quality Headphones

Inbox x



shrestha.koderkaran@gmail.com

1:35 AM (1 minute ago)



to me ▼

Subject: Customer Review: Versatile and High-Quality Headphones

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The Support Team

Conclusion

- This project integrates OpenAI GPT-3.5-turbo into a Flask web app to generate personalized emails. The app uses OpenAI for generating content and Flask-Mail for sending emails.