



PROJECT REPORT

LLM Feedback Console



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Project Report: LLM Feedback Console

Executive Summary

Project Overview:

The User Feedback System for Query Responses project aimed to develop a tool that enables users to submit feedback on the answers they receive from a DuckDuckGo search. The feedback system captures user ratings and comments, stores them in a CSV file, and provides statistical analysis of the collected feedback to assess user satisfaction. The project was completed over a 4-day internship period, resulting in a fully functional feedback system integrated with a search engine.

Key Deliverables:

- Feedback Collection System: A module that captures user feedback, including ratings and comments.
- Feedback Storage: A system to store feedback data in a CSV file.
- Feedback Analysis Tool: A script to calculate and display user satisfaction statistics from the stored feedback.

Outcome:

The project successfully met its objectives by delivering a robust feedback system that allows users to rate their satisfaction with search query answers. The system's integration with DuckDuckGo and the automated feedback analysis tool provided valuable insights into user satisfaction.

Introduction:

Purpose of the Project:

The project was initiated to develop a feedback mechanism for answers generated by a DuckDuckGo search engine. The feedback system helps gather user insights, assess satisfaction, and improve the quality of search results by identifying areas needing improvement based on user feedback.

Project Scope:

The project focused on building a basic feedback system for collecting user ratings and comments on search query answers. It involved integrating a search engine, storing feedback in a structured format, and providing basic statistical analysis. The scope did not include advanced data visualization or machine learning for sentiment analysis.

Objectives:

- Develop a feedback collection system for search query answers.
- Store feedback data securely in a CSV file format.
- Provide statistical analysis of feedback data to assess user satisfaction.

Requirements and Specifications:

Input Data:

- **Structure:** The input data consists of user queries and feedback.
- **CSV Fields:** Feedback data is stored in a CSV file with the following fields: "RATING" (numeric value between 1 to 5) and "COMMENT OR SUGGESTION" (text).

Output Data:

- **GPA:** The system outputs the average satisfaction rating and lists all feedback comments.
- **Storage:** Feedback is stored in the Feedback.csv file located in the "Feedback data" directory.

Project Planning and Timeline:

Project TimelineL

1. Day 1: Project Setup and Initial Development

- Set up the project environment.
- Develop the main script (main.py) for taking user input and generating answers.
- Begin developing the feedback collection module (take_feedback.py).

2. Day 2: Complete Feedback Collection and Storage

- Finalize the feedback collection module.
- Implement feedback storage in a CSV file.

3. Day 3: Develop Feedback Statistics and Testing

- Develop the feedback statistics script (feedback_stats.py).
- Conduct testing and debugging.

4. Day 4: Final Testing, Documentation, and Review

- Conduct final testing and validation.
- Prepare project documentation and conduct a project review.

Resource Allocation:

- Software: Python, pandas, duckduckgo_search
 - Tools: VSCode, Pycharm
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Development Process:

Environment Setup:

- Tools Used: Python, pandas library for data manipulation, duckduckgo_search for search queries.
- Setup: Python environment configured with necessary libraries, project structure organized into modules.

Core Functionality:

- Feedback Collection (feedback()): Prompts the user for a rating (1-5) and collects additional comments if the rating is 3 or below.
- Feedback Storage: Checks for the existence of a directory and CSV file; creates them if necessary and appends new feedback data.
- Feedback Analysis (feedback_stats.py): Reads feedback data from CSV, calculates average satisfaction rating, and lists all feedback comments.

User Interaction:

- The user inputs a query, receives a search-generated answer, and provides feedback via a command-line interface.
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Testing and Validation:

Testing Approach:

- **Unit Testing:** Tested individual functions for correct input handling and data storage.
- **Manual Testing:** Conducted manual testing for the entire feedback loop from query input to feedback submission.

Test Cases:

- **Valid Input:** Normal case with valid rating and optional comment.
- **Invalid Input:** Handled cases with empty or non-numeric input for ratings.

Results

- All test cases passed successfully, validating the system's robustness and error handling.

Error Handling

- Implemented checks for empty fields, invalid ratings, and missing files to ensure smooth user experience.
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Challenges and Solutions:

Challenges Encountered:

- **Input Validation:** Ensuring all user inputs were correctly formatted and valid.
- **Feedback Storage:** Managing file creation and data appending without data loss or duplication.

Solutions Implemented:

- **Enhanced Input Validation:** Added multiple checks for user inputs to ensure data integrity.
 - **Robust Storage Mechanism:** Implemented file checks and conditional creation logic to handle storage effectively.
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Final Output:

Program Functionality:

The final system allows users to submit queries, receive answers, provide feedback, and view feedback statistics. It efficiently stores and analyzes user feedback in a CSV format.

Sample Output:

- **Answer:** Generated by DuckDuckGo search.
- **Feedback Statistics:** Displays average satisfaction and lists all feedback comments.

File Storage:

Feedback data is stored in Feedback.csv in the "Feedback data" directory. The file is automatically created if not found.

Conclusion:

Project Success:

The project successfully met its objectives by delivering a complete feedback system integrated with a search engine. The tool was effective in capturing and analyzing user feedback, providing valuable insights into user satisfaction.

Learning Outcomes:

- **Technical Skills:** Improved knowledge of Python file handling, data manipulation, and user interaction.
- **Professional Development:** Gained experience in project planning, testing, and documentation.