

Group Member 1

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CSE589 DIC Project Phase 3

Tools & Framework

- [Streamlit](#) (Front End)
- [Python](#) (Back End)
- [pysqlite3](#) (Database)

Installation Guide

- Install python in the system
- Go inside the src/phase3/ directory where all the files are.
- Execute the following commands to install tools for the app to work:
 - pip install streamlit
 - pip install scikit-learn
 - pip install pysqlite3
 - pip install keras
 - pip install tensorflow
- Open command line in the src/phase3/ directory where the app.py file is
- Execute: chmod +x run.sh (To grant permission)
- Execute: ./run.sh (For the first time) {This command deletes game_review_database.db and executes "streamlit run app.py"}
- Execute: streamlit run app.py (From second time onwards)

Product Description

In this phase of the project we have developed a web application that will visualize the data that our trained model is generating. It will help users to interact with the application and access valuable information.

Phase 1 involved performing EDA on a huge data set of amazon reviews on Video Games.

Phase 2 involved training our model with that cleaned data.

Phase 3 involves integrating that model with our web application to provide visual results.

Our phase 3 web app product involves three different type of users:

- Admin
- Tester
- Client

Admin has the privileges to add new games in the database. Which can be later used by testers. Admin also have the privileges to delete games or any spam reviews from the database. And as expected, the web application is interactive enough to use these privileges.

Testers have the privileges to choose any game and add their brief review about the chosen game. They can see and select any new game that gets added by the admin. On adding their review, our trained model will be used to predict whether the review is positive or negative. Testers are the main users that are interacting with the model. Upon adding a new review, our model is invoked to analyze the new review and add it into the database. This is where our model is integrated with the web application.

Clients have the privilege to see a visual tabular structure of games sorted in descending order with respect to the score generated by our product. They will also be able to view reviews corresponding to each game and the prediction for each review.

We have created two tables in our game_review_database.db for storing information:

- 1) games: [id, game_name, game_score]
- 2) reviews: [id, game_name, game_review, game_review_prediction]

“games” table is used to store information about different games. New games added by admin go inside this table, which can be retrieved by other users.

“reviews” table is used to store information about different reviews related to different games along with the model prediction.

Product Usage

Admin Page Feature Usage:

- Write a new game and click on the “Add New Game” to add in the database and will effectively reflect on the portal.
- Select the checkboxes next to games and then click “Delete Selected Games” to delete the unwanted games from the database and will effectively reflect on the portal.
- Select the checkboxes next to reviews and then click “Delete Selected Reviews” to delete the unwanted reviews from the database and will effectively reflect on the portal.

Tester Page Feature Usage:

- Choose a game from the drop down. Write a review in the input field. And then click on “Submit and Analyze” to activate the model for predicting the type of review. All these details (game name, game review & game review prediction) will be added in the database and will effectively reflect on the portal.

Client Page Feature Usage:

- Without any manual work, the web application presents processed data for clients to use.

Other Functional & Non Functional Requirements:

Our portal provides functional requirements such as:

- Warning message generation when the delete button is pressed without selecting any game or review.
- Warning message generation when the add button is pressed without specifying any new game or new review.
- Success message generation when all the required fields are selected properly and input fields are filled with text and the button is clicked.

Our portal provides non-functional requirements such as:

- Security: Having admin features ensure the safety of the data that floats around the portal.
- Maintainability: With easy to use GUI, the data in the portal can be customized to facilitate client’s needs.

Product Benefits

The interactive portal benefits users to view the list of best games based on the reviews added by testers. The portal eliminates the need of going through each review to determine the worth of a game by predicting and assigning a score to each game. And in case of any faulty prediction or spam review, admins can modify the content in the portal to provide best service to the users.

Future Work

- Having a feature of login will add an extra layer of security to the application

- Deploying the app online for users to use.