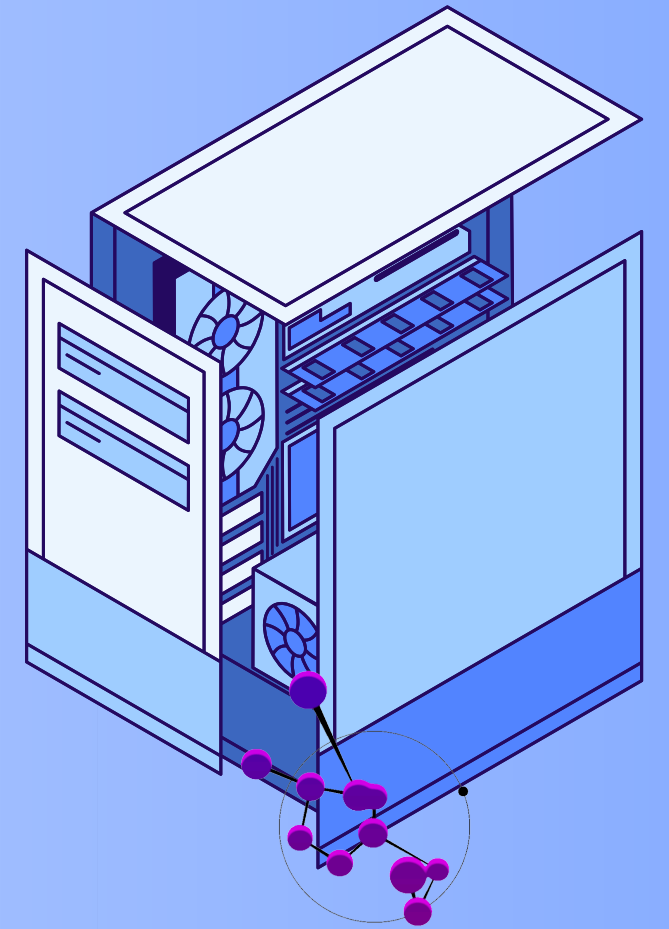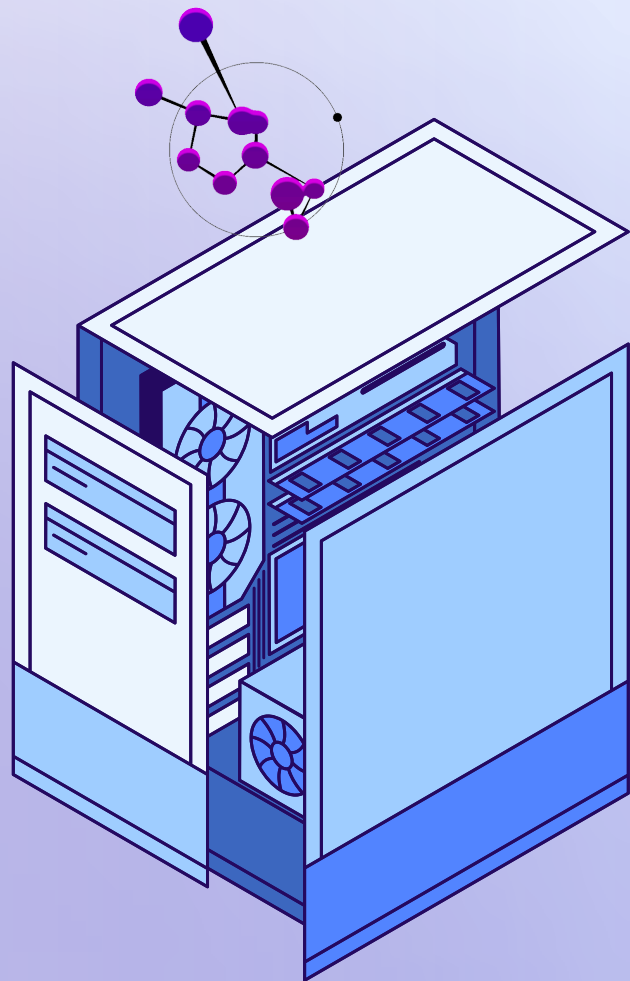# COMPUTER SCIENCE PROJECT

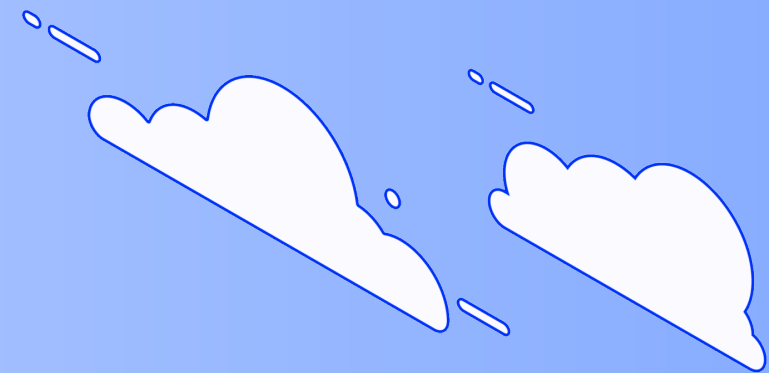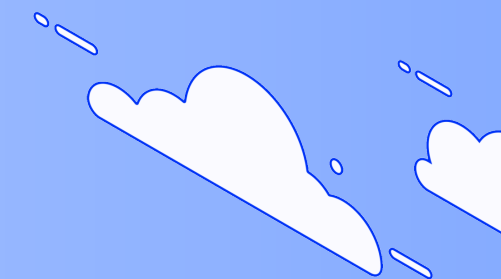## MOVIE INSIGHT ASSISTANT

www.movieinsightassistant.com

OVERVIEW

The Movie Insight Assistant is an interactive application designed to provide comprehensive movie information and personalized recommendations. Leveraging IMDb and TMDb APIs, the app allows users to search for movie details by title, including plot summaries, cast, and ratings. It also offers genre-based recommendations, dynamically fetching and displaying movie suggestions based on user-selected genres.

PROGRAM ANALYSIS CHART (PAC)

INPUT

- The user clicks on genre buttons to select a genre.
- The user enters a movie title in the input field.
- The user clicks the Send button or presses Enter to submit the movie title.
- The user clicks the Clear History button to remove previous chat messages.
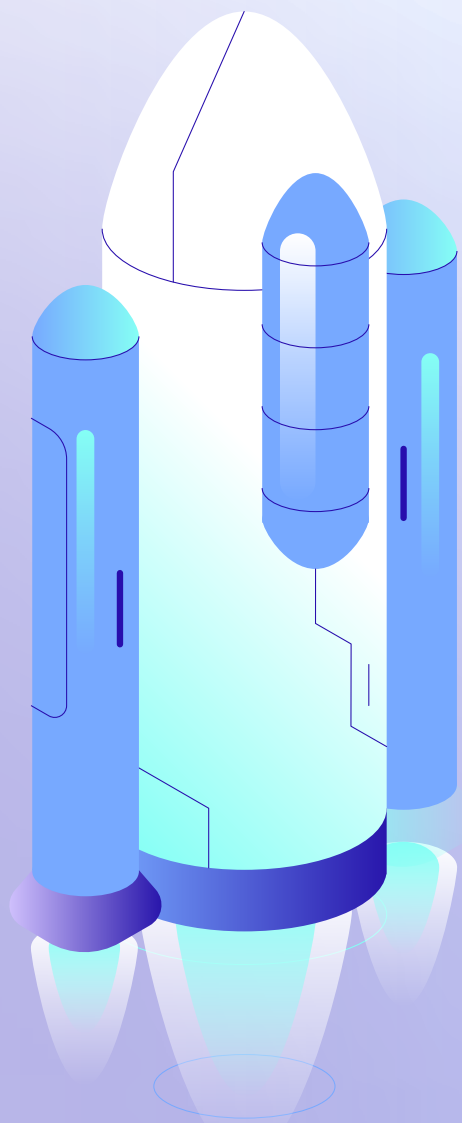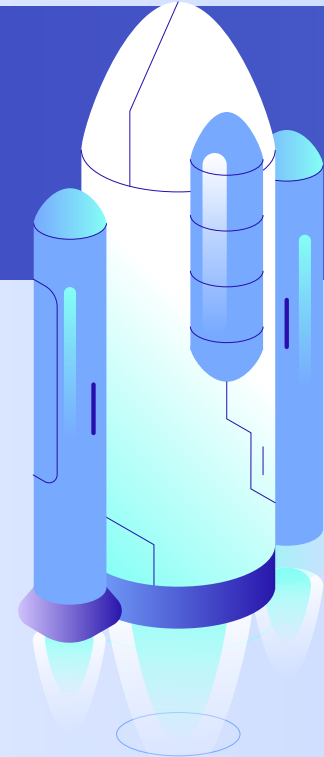- The user clicks the Full-Screen button to toggle full-screen mode.

OUTPUT

- The system displays a list of movies based on the selected genre.
- The system provides detailed information about a specific movie, including title, year, genres, directors, cast, plot, rating, and languages.
- The chat history is cleared, removing all previous messages.
- The application toggles between full-screen and windowed modes.

PROCESSING

- On genre selection, the application sends a request to the TMDb API to fetch movies of the chosen genre and processes the response to display a formatted list.
- On movie search, the application queries the IMDb database for details about the entered movie title, processes the response to extract relevant information, and displays it in the chat history.
- The system manages chat history by appending new messages and updating the scroll region dynamically.
- The application handles full-screen mode toggling by adjusting window attributes and button text based on the current state.

SOLUTION ALTERNATIVES

- For genre-based recommendations, consider using additional movie databases or APIs such as OMDb or MovieLens for varied data sources and recommendations.
- For movie information retrieval, alternatives include integrating other movie information APIs or using web scraping techniques for real-time data.
- For chat history management, explore options like using a more sophisticated chat framework or incorporating database storage for persistent chat logs.
- For full-screen functionality, assess other libraries or methods for managing window states and transitions, or provide users with custom full-screen and windowed modes.
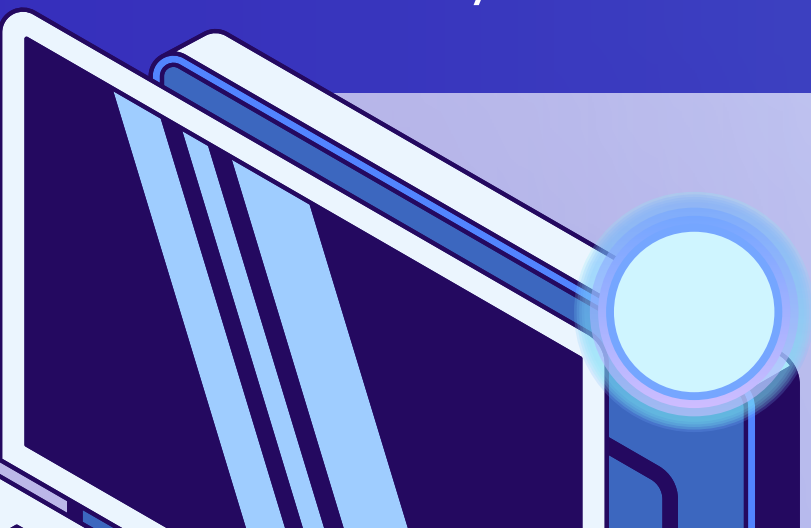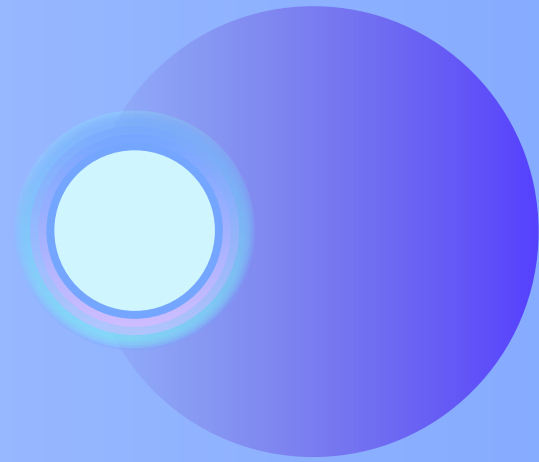
ALGORITHM

1. Start by configuring the main window of the application with the title "Movie Insight Assistant" and specify its dimensions.
2. Create and arrange the user interface elements, including a header button at the top of the window, a frame for chat history, genre selection buttons, an input field for movie titles, a send button, and a button for clearing the chat history.
3. When a user clicks on a genre button, capture the selected genre.
4. Use the genre information to make an API request to TMDb to retrieve a list of movies associated with that genre.
5. Process the response from the API, format the movie list, and display it in the chat history frame.
6. When the user clicks the "Send" button or presses the Enter key, capture the movie title entered in the input field.
7. Make an API request to TMDb with the movie title to retrieve detailed information about the specified movie.
8. Process the API response to extract relevant movie details and display them in the chat history frame.
9. When the "Clear History" button is clicked, remove all existing messages from the chat history frame.
10. Update the scroll region of the chat history frame to reflect the removal of messages.
11. When the "Full-Screen" button is clicked, toggle the application window between full-screen and windowed modes and update the button text to reflect the current mode, such as switching between "Full-Screen" and "Exit Full-Screen."
12. Continuously adjust the layout to accommodate new messages, ensuring all elements are properly aligned and formatted in the chat history frame for a clear view.

THANK YOU!

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