S.D.M.E Society's

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(AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY)

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

Synopsis On

FACE RECOGNITION TO MOVIE RECOMMENDER

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ABSTRACT:

The proposed system integrates facial recognition technology with a movie recommendation system. Users are required to register on the web platform, where their facial features are captured and stored securely. Upon subsequent login attempts, the system verifies the user's identity using facial recognition. Upon successful authentication, users are redirected to the movie recommendation system. This system utilizes a dataset of movies categorized by genre and unique identifiers.

Users can search for movies based on genre preferences and unique IDs assigned to each film. The integration of facial recognition enhances user authentication and provides a seamless transition to the movie recommendation functionality, offering personalized movie suggestions based on individual preferences.

INTRODUCTION:

In this digital era, we're witnessing the fusion of facial recognition technology with entertainment platforms, specifically in movie recommendation systems. By incorporating facial recognition into user registration and login processes, coupled with a dataset users can seamlessly authenticate themselves and access personalized movie recommendations tailored to their preferences. This integration not only enhances user convenience but also ensures a secure and engaging experience, offering a glimpse into the future of personalized entertainment discovery.

PROBLEM STATEMENT:

To develop a web-app of facial recognition to movie recommender system.

SOFTWARE AND HARDWARE REQUIREMENTS:

SOFTWARE RESUIREMENTS:

OS: Windows 11/2021

Movie Dataset

OpenCV

Integrated Development Environment (IDE): Any Python-compatible IDE such as PyCharm, Visual Studio Code, or Jupyter Notebook for writing and debugging the code.

HARDWARE REQUIREMENTS:

4GB of RAM Minimum

500GB Hard Disk

OBJECTIVE OF THE PROPOSED WORK:

- To enable secure user authentication through facial recognition technology during registration and login processes.
- To facilitate seamless access to the movie recommendation system upon successful authentication, enhancing user convenience.
- To provide personalized movie recommendations based on individual preferences, leveraging a comprehensive dataset categorized by genre and unique identifiers.
- To streamline the process of movie selection by allowing users to search for films based on their likes.
- To foster a user-friendly interface that encourages exploration and discovery of new and relevant content, thereby enriching the overall entertainment experience.

PROPOSED METHODOLOGY:

- Gather a large dataset of movie posters/images along with their corresponding metadata (e.g., genre, release year, actors, directors, etc.)
- Utilize a face detection algorithm to locate and extract faces from the user's images.
- Utilize collaborative filtering or content-based recommendation techniques to initially populate user profiles with movie preferences (e.g., ratings, watch history).
- Compute the similarity between the facial embeddings of users and those of movie characters/actors.
- Based on the computed similarities, generate a list of recommended movies for each user.
- Deploy the face recognition-based movie recommender system as a web or mobile application.
- Integrate the system with existing movie streaming platforms or create a standalone application where users can interact with the recommendation engine.

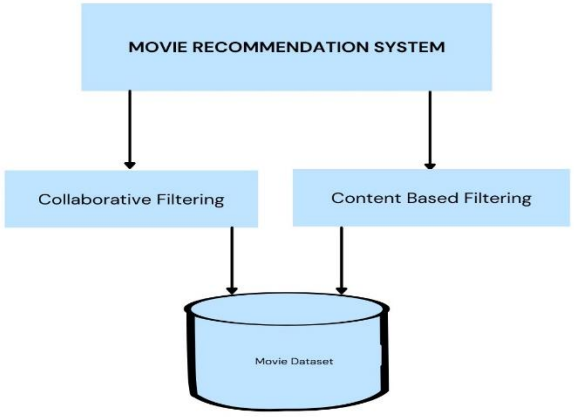

Fig1:Movie Recommendation

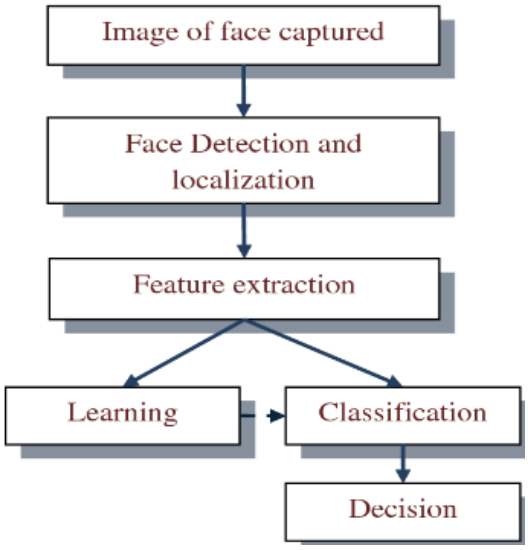

Fig 2:Face Recognition

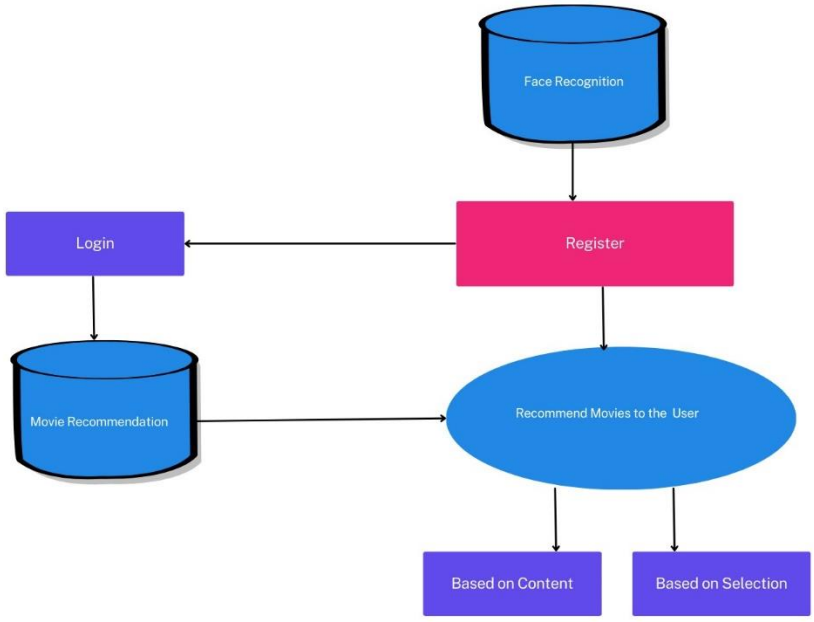

Fig 3: Face Recognition to Movie Recommender

EXPECTED OUTCOME OF THE PROPOSED SYSTEM:

- **Convenient Access:** Users can effortlessly login using facial recognition, eliminating the need for passwords.
- **Personalized Recommendations:** Users receive movie suggestions tailored to their tastes **and preferences.**
- **Enhanced Security:** Facial recognition adds an extra layer of security to user accounts.
- **Improved User Engagement:** Personalized recommendations encourage users to explore and discover new movies.
- **Time Savings:** Quick and easy access to the platform saves users time during login.
- **Customized Content Discovery:** Users can easily find movies based on specific genres or favorite actors.

APPLICATIONS:

- **Entertainment Platforms:** Integration into streaming services and movie databases to enhance user experience and engagement.
- **Security Systems:** Utilization in secure access control systems for entertainment venues or digital media libraries.
- **Film Industry Insights:** Utilization in market research applications for personalized recommendations of movies for focus groups and audience testing based on facial recognition and demographic data.
- **Language and Accessibility:** Integration into language learning applications for personalized movie recommendations with subtitles or dubbing options based on user language preferences.

CONCLUSION:

In conclusion, the integration of facial recognition technology into movie recommendation systems presents a multitude of opportunities to enhance user experiences, security, and personalization in the realm of entertainment. By leveraging facial recognition for secure authentication during registration and login processes, users can seamlessly access personalized movie recommendations tailored to their preferences. This innovative approach not only streamlines the user experience but also ensures a heightened level of security by eliminating the need for traditional authentication methods.

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