Movie Magic: Smart Movie Ticket Booking System

Submitted by:	Damarakuppam Varshitha
Department:	AI & Data Science
Institution:	Annamacharya institute of technology and sciences, Tirupati
Email:	damarakkupamv@gmail.com
Running On:	http://localhost:5000/\

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1. Abstract

Movie Magic is a locally deployed, intelligent movie ticket-booking system developed using Python Flask. It provides users with a user-friendly interface to register, log in, view available movies, and book tickets. Administrators can monitor bookings, while data is stored securely using local data files or databases. The system simplifies the traditional booking process through digital transformation without requiring cloud dependency.

2. Introduction

Traditional movie ticket booking often involves long queues, limited booking hours, and human error. Movie Magic provides a modern, digital solution that can be run on any local machine. This system allows users to interact via a clean web interface, ensuring a smooth and efficient experience for both customers and administrators.

3. Problem Statement

1. Long queues at cinema counters
2. Manual errors in booking records
3. No booking access after hours
4. Lack of centralized data management

A locally hosted solution allows users to easily manage ticket bookings digitally, eliminating the drawbacks of manual systems.

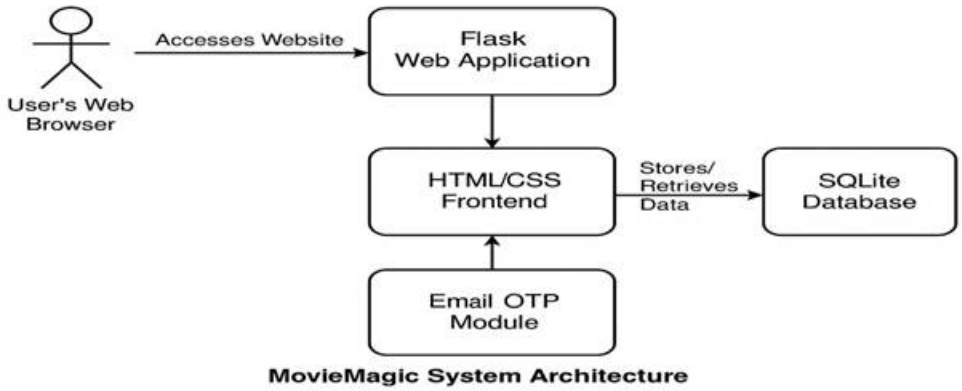
4. Objectives

1. Design a Flask-based movie booking platform
2. Enable user registration, login, and session management
3. Display available movies and allow booking by movie and timing
4. Create a local admin view for monitoring bookings

5. Ensure a smooth user experience through a clean and responsive interface

5. System Architecture

Figure 1. Movie Magic System Architecture (Local Deployment)



1. **Frontend:** HTML, CSS, Bootstrap
2. **Backend:** Python Flask
3. **Database:** Local JSON/CSV or SQLite file storage
4. **Hosting:** Localhost (http://127.0.0.1:5000 or http://localhost:5000)

6. Key Features

a. User Module

1. Register and log in securely
2. Logout and session timeout handling
3. Forgot password (optional)

b. Movie Module

1. List of movies with images and ratings
2. Search functionality by movie name

c. Booking Module

1. Book tickets by selecting movie and showtime
2. Input number of tickets and confirm booking

d. Admin Module

1. View and manage user bookings
2. Display all bookings stored in local database

7. Technologies Used

Layer	Tools & Services
Frontend	HTML, CSS, Bootstrap
Backend	Python, Flask
Local Database	SQLite / JSON / CSV
Hosting	Localhost (127.0.0.1:5000)
Version Control	Git, GitHub

8. Screenshots

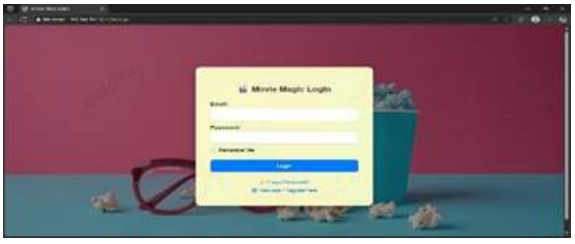
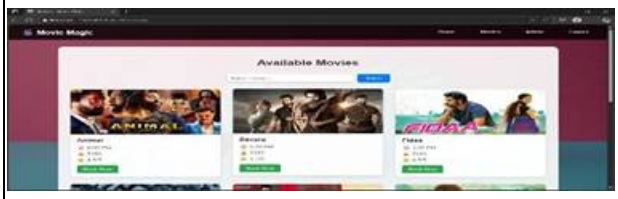
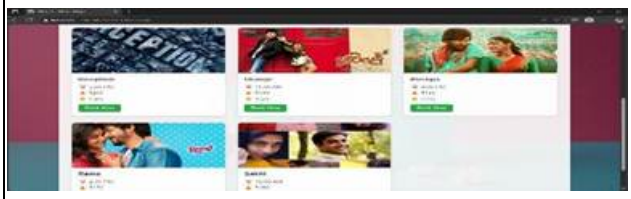
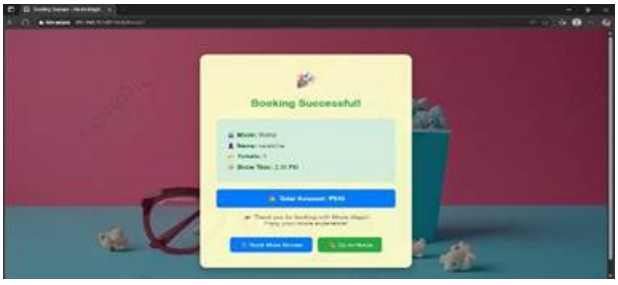
Screenshot	Caption (Figure #)
	Figure 1: User Login Page

	Figure 2: New User Registration Form
 	Figure 3: Movie Listings with Ratings
	Figure 4: Booking Interface with Form Fields
	Figure 5: Admin Dashboard showing bookings

9. Code Overview

1. app.py: Contains all Flask routes and app logic
2. templates/: HTML files for UI rendering
3. static/: CSS, images, or JS used in frontend
4. data/: Contains local storage files like bookings.csv or users.json

10. Challenges Faced

1. Managing session state in local Flask setup
2. Ensuring secure handling of login and registration data
3. Loading and saving structured data using local files (CSV/JSON)
4. Responsive styling using Bootstrap

11. Conclusion & Future Scope

Movie Magic demonstrates a functional, local web app for movie ticket booking using Flask. It replaces manual systems and makes booking efficient and convenient. Future upgrades may include:

1. Integration of seat selection
2. Adding admin authentication
3. Using SQLite for better relational storage
4. Transitioning to cloud deployment (AWS EC2 + DynamoDB)

12. References

1. Flask Documentation: https://flask.palletsprojects.com
2. W3Schools: HTML/CSS Basics

3. Bootstrap Docs: https://getbootstrap.com
4. GitHub Guides
5. ChatGPT for debugging and guidance