# Project Report

## *Movie Review and Recommendation Engine*


## Abstract

The Movie Review and Recommendation Engine is a database-driven system designed to analyze movie ratings, user reviews, and preferences to generate recommendations. Using MySQL, the system calculates average ratings, ranks movies, and provides insights into top-rated content. This project demonstrates database design, query optimization, and basic recommendation logic.


## Introduction

With the growing number of movies, users often face difficulty in selecting what to watch. This project helps users by analyzing ratings and reviews to suggest the best-rated movies. It simulates the core functionality of platforms like IMDb or Netflix recommendation engines.

## Objectives:

1. Store movie, user, rating, and review information in a database.
2. Calculate average ratings for movies.
3. Rank movies based on ratings.
4. Generate top recommendations.

## Tools Used

- **Database:** MySQL Workbench
- **Query Language:** SQL
- **Export Format:** CSV for query results

## Steps Involved

### 1. Database Design

Four tables were created:

1. **Users** – Stores user information.

2. **Movies** – Stores movie details.
3. **Ratings** – Stores user ratings for movies.
4. **Reviews** – Stores user reviews for movies.

**2. Sample Data Insertion**

Sample users, movies, ratings, and reviews were inserted to test the system.

**3. Queries**

- **Average Ratings per Movie:** Calculated using AVG() function.
- **Top-Rated Movies:** Ranked using RANK() (MySQL 8.0+) or ORDER BY + LIMIT.
- **Views:** Created Top_Rated_Movies view to easily fetch recommendations.

**4. Exporting Results**

- Exported top-rated movies and average ratings to **CSV** files for reporting.

## Conclusion

This project successfully demonstrates the creation of a movie recommendation system using SQL. It allows users to:

- View average ratings of movies
- Identify top-ranked movies
- Generate recommendations based on user ratings

**Future Work:**

- Implement personalized recommendations based on user similarity.
- Include genre-based filtering and trending movies.