**Machine Learning**

**Mini Project**

**Team Members:**

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**Title**

# Movie Recommendation System using Machine Learning

# **Approach:**

The Movie Recommendation System is a mini project that leverages machine learning techniques to provide personalized movie recommendations to users based on their historical movie ratings. The system aims to enhance the user experience by suggesting movies that align with their preferences, ultimately increasing user engagement and satisfaction. The project utilizes the MovieLens dataset and focuses on collaborative filtering methods to build a recommendation model. The project involves data preprocessing, similarity calculation between movies, and the creation of a functional recommendation engine.

**Objectives:**

1. To build a movie recommendation system using collaborative filtering techniques.
2. To pre-process and analyze the MovieLens dataset to extract relevant information.
3. To calculate similarity scores between movies using cosine similarity.
4. To provide users with movie recommendations based on their input preferences.
5. To create informative data visualizations using Matplotlib to enhance the project's presentation and insights.
6. To gain practical experience in data pre-processing, collaborative filtering, basic data visualization, and user interaction using Python.

**References/Source of Data:**

The dataset used for this project is the MovieLens dataset, a popular choice for building recommendation systems. It provides historical movie ratings and user preferences, allowing for the development of personalized movie recommendations.

* Dataset Source: https://grouplens.org/datasets/movielens