

Task 5: Product Recommendation System (Movies)

Internship at Nexus AI Digital — Data Science & Machine Learning

Author: Syed Huzaifa Bin Khamis

Objective:

GlobalMart wants to suggest relevant products to customers, similar to how streaming platforms recommend movies. For this task, we built a content-based recommender system using the TMDb 5000 Movies Dataset.

Steps Taken:

1. Loaded and cleaned the movie dataset, focusing on *title* and *overview*.
2. Converted movie descriptions into numerical vectors using TF-IDF.
3. Measured similarity between movies using cosine similarity.
4. Built a Python function that takes a movie title as input and returns the top 5 most similar movies.

Example Results:

- **Input:** *The Dark Knight* → Recommended: Batman Begins, The Dark Knight Rises, Iron Man, etc.
- **Input:** *Avatar* → Recommended: John Carter, Guardians of the Galaxy, Star Trek, etc.
- **Input:** *Inception* → Recommended: Shutter Island, Interstellar, The Matrix, etc.

Key Takeaway:

This recommender helps suggest similar movies based on descriptions, which is useful for new users or when browsing for alternatives. It works without user history but is limited to finding *similar content only*.

