**Movie Recommender System**

**Overview**

This project involves building a movie recommender system using a collaborative filtering approach. It leverages data from multiple sources, including movie metadata, keywords, credits, links, and ratings. The goal is to predict user ratings for movies, enabling personalized recommendations.

**Author**

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**Initial work**

* [Portfolio Projects](https://github.com/Saron222/PortfolioProjects)

**Released on**

* GitHub

**My professional profile on LinkedIn**

* [My LinkedIn Profile](https://www.linkedin.com/in/saron-yaya/)

**Showcase**

* **Data Cleaning and Preparation:** We ensure data consistency by changing the datatype of ID columns to numeric and dropping rows with missing ID value.
* **Model Training**: We defined the model using TensorFlow's Keras API and trained the model using the training data.
* **Prediction Results**

**Technologies Used**

* **Python**: The primary programming language for data processing and model building.
* **Pandas**: For data manipulation and analysis.
* **NumPy**: For numerical computations.
* **TensorFlow & Keras**: For building and training the neural network model.
* **Scikit-learn**: For splitting the data into training and testing sets.

**Interpreting Results**

The training and validation performance metrics indicate the model's learning and predictive capabilities. However, slight increases in validation loss and mean squared error towards later epochs suggest potential overfitting.

**Installation**

1. Clone the repository: git clone [https:// https://github.com/Saron222/PortfolioProjects.git](https://github.com/saronyaya/DSC510.git)
2. Navigate to the project directory: **cd movie-recommender-system.ipynb**

**Contributing**

1. Fork the repository from [Saron222/PortfolioProjects](https://github.com/Saron222/PortfolioProjects/fork)
2. Create your feature branch: **git checkout -b feature/your-feature-name**
3. Commit your changes: **git commit -am 'Add your feature'**
4. Push to the branch: **git push origin feature/your-feature-name**
5. Create a new Pull Request in the original repository