PRESENTATION OUTLINE:
A Parallel Recommender System Using a Collaborative Filtering Algorithm for Movie Recommender System

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November 17, 2021

1 Introduction

- Title of the presentation and self-introduction

2 Background of Recommendation Systems

- What are Recommendation Systems? [1]
- Types of Recommendation Systems
- Collaborative Filtering for Movie Recommendation

3 Types of Recommendation Systems

- Collaborative Filtering [2]
- Content-Based Filtering [3]

4 Literature Review

- Similarity Computation –

i Cosine Vector (CV) Similarity [4]

ii Pearson Correlation (PC) Similarity [5] [6]

iii JacRA Similarity [7]

iv Spearman Correlation (SC) [8]

- Rating Prediction –

i Weighted Average (WA) [9]

ii Mean-Centering (MC) [10] [11]

iii Z-Score (ZS) [12]

- Correntropy Similarity –

i Correntropy Similarity [13]

ii User-based prediction [14]

iii Item-based prediction [15]

5 Introducing Spark Framework

- What is Apache Spark? [16]
- Components of Apache Spark [17]
- Spark Features [18]
- Hadoop vs Apache [19]
- High Level Architecture-Recommendation Engine
- The task scheduling procedure in Spark [20]

6 Methodology

- Algorithms that we have used –

i k-nearest neighbors (KNN) Algorithm [21]

ii Alternating Least Square (ALS) [22]

iii Linear Regression Analysis [23]

- Measuring Accuracy of The Model – MAE, MSE, RMSE [24]
- Comparison between our dataset vs the paper we followed [20]
- Methodology for MovieLens-100k Dataset
- Removing Noise From ML-100k Dataset
- Methodology for Netflix-6.2M Dataset
- Applying Gaussian Distribution on Netflix for Selecting More Effective Dataset

7 Experimental Results

- MovieLens-100k & Netflix-6.2M Data Statistics
- Movie Recommender System using KNN Algorithm :: MovieLens-100k
- Movie Recommender System using ALS Algorithm :: Netflix-6.2M
- Comparison Between Netflix-6.2M & ML-100K Datasets ALS Method
- The Space and Time Complexity of User-Based and Item-Based Methods
- Executor Summary of Two Datasets
- Measuring performance of two datasets

8 Ganglia Cluster Report

- System Information for Movielens Cluster
- System Information for Netflix Cluster
- Ganglia Cluster Report :: MovieLens-100k
- Ganglia Cluster Report :: Netflix-6.2M

9 Conclusion

- Limitations & future work
- Discussion

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