# MET CS 777 – Term Project Report

**Project:** CityEats Recommender (PySpark ALS)

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**Date:**

## 1. Introduction

Top-N recommendation with PySpark ALS. We evaluate ranking with Precision@K, Recall@K, and NDCG@K.

## 2. Data

Ratings parquet: user\_id, item\_id, rating (double). A small CSV sample is included for grading.

## 3. Methodology

StringIndexer → user\_idx, biz\_idx. Global random split (0.9 train). ALS with nonnegative factors and coldStart=drop.

## 4. Results (K=50)

|  |  |
| --- | --- |
| Precision@50 | 0.0011 |
| Recall@50 | 0.0129 |
| NDCG@50 | 0.0042 |
| Notes | Exclude-seen eval; global split |

## 5. Conclusion & Next Steps

Next: min-interaction filters, light hyperparameter sweep, and Dataproc Serverless run for scale.