

Topline Summary – Recommendation System Evaluation

Key Takeaways

- SVD outperformed all models on evaluable users (highest F1@5 and Hit@5)
- Co-search and Co-purchase worked best in fallback cases
- 100% user coverage ensured via layered fallback logic

Fallback Strategy Performance

- Co-Search – F1@5: 0.26, Hit@5: 0.43
- Co-Purchase – F1@5: 0.23, Hit@5: 0.39
- Popularity List – F1@5: 0.18, Hit@5: 0.35

Strategy Performance – Evaluable Users

- SVD – F1@5: 0.41, Hit@5: 0.65
- Item-Item CF – F1@5: 0.34, Hit@5: 0.55
- User-User CF – F1@5: 0.30, Hit@5: 0.50

System Robustness

- Dynamic strategy selection based on user history
- Explanation tags included with all recommendations
- Modular pipeline ensures transparency and adaptability