Electrical & Computer Engineering & Computer Science (ECECS)

2nd

TECHNICAL REPORT TEMPLATE

SEMESTER

CONTENTS

Shopping Behavior Technical Report Analysis

Introduction

Retailers struggle to decode customer shopping patterns, optimize inventory, and personalize campaigns. This leads to lost revenue and gaps in customer satisfaction. Our objective is to

Executive Summary

Shopping Behavior Analysis:

Unlocking Insights Through Data and AI

Our project uses AI to analyze and predict sh to stock and what current customers may be objective is to use AI to provide actionable i decisions and to help enhance customer expe shopping history and current trend data to cr the data.

Highlights of Project

Helping e-commerce businesses by providing

- Personalized recommendations
- Seasonal forecasting
- Demographic insights
- Data integration
- Interactive dashboards

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use data and AI to provide personalized recommendations, seasonal forecasting, demographic insights, data integration, and interactive dashboards.
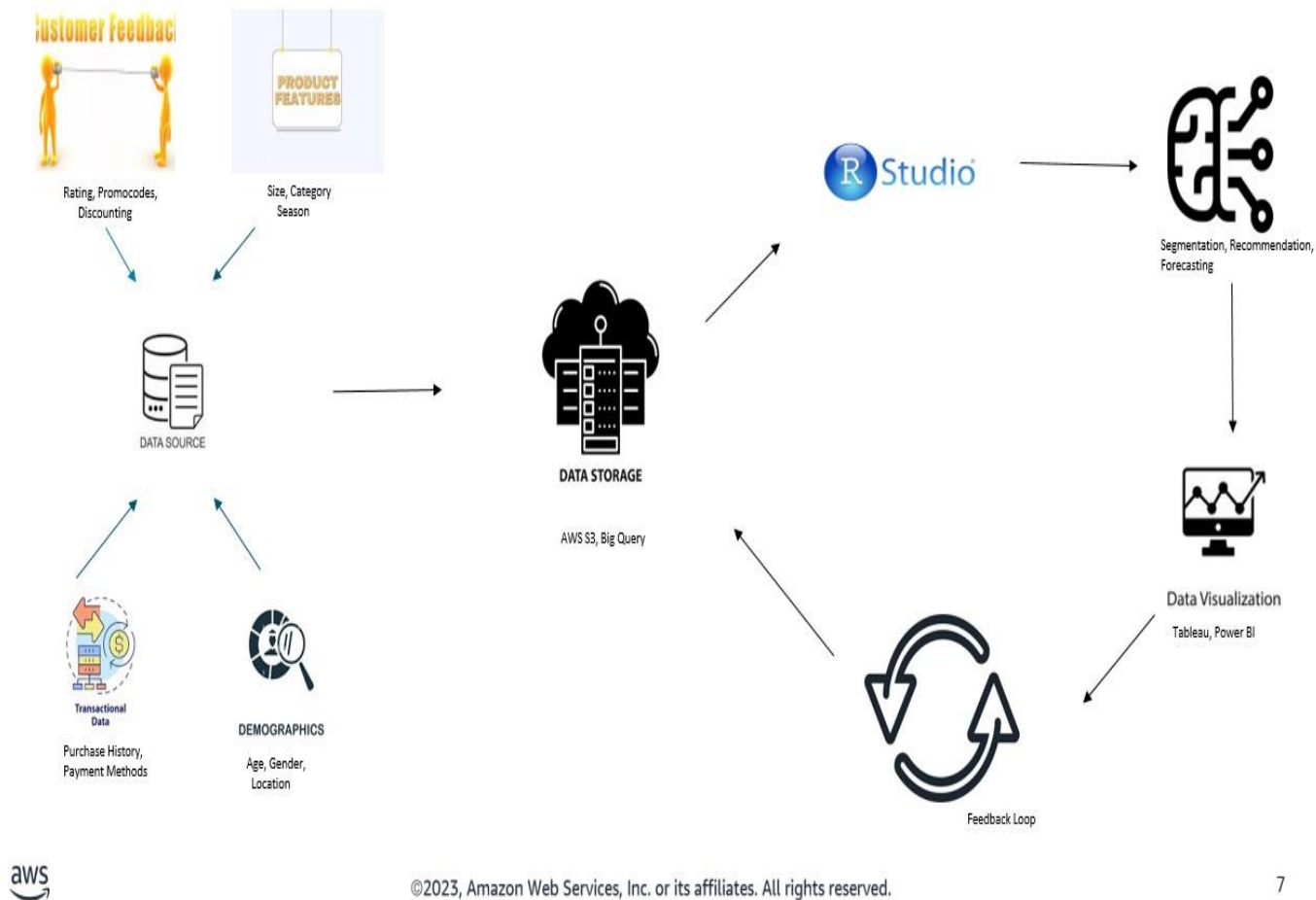
Methodology

We use two data sets for our analysis: one data set about customer shopping behavior and one data set about general shopping trends. We will evaluate the data on three key metrics: purchase counts, seasonal preferences, and gender distribution.

Results Section

1. **Data Engineering Pipeline**:

Architecture diagram of the solution

Conclusion

We have found that blouse, jewelry, and pants are the most popular items purchased. The business we investigated had the most sales in the fall and a majority male customer base. Clothing was the most purchased category. These are all insights that can be used to help the business plan for what to buy for the stores.