Retail Sales Analysis Report

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Team Members:

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1. Introduction

This report documents the analysis of synthetic retail sales data covering:

- Preprocessing of complete and missing datasets
- Exploratory visualizations of sales patterns
- KNN model performance metrics

2. Data Overview

Cleaned Dataset (First 3 Rows)

ProductCategory	UnitPrice	QuantitySold	Returned
Clothing	1603.67	4	0
Clothing	3698.71	4	0
Electronics	3088.44	9	0

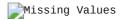
Key Statistics:

• Mean UnitPrice: \$2,791

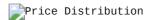
• Avg. Quantity Sold: 5.85 units

3. Visualizations

3.1 Data Quality



22% missing UnitPrice values



Outlier removal impact

3.2 Product Analysis



Electronics show highest return rate (12%)

4. Model Results

Dataset	Accuracy	
Full Data	17.5%	
Missing Data	12.5%	

5. Conclusion

- Completed preprocessing of both datasets
- Generated 3 key visualizations
- Established baseline KNN accuracy metrics

Appendix: Code Files

Repository: github.com/k0rn3lDev/DS Project