



# Customer Behavior Analysis

An end-to-end project demonstrating a complete analytics pipeline.



# Project Overview: From Data to Insights

01

## Data Extraction

Gathering raw customer behavior data from various sources.

02

## ETL Processing

Transforming and cleaning data for analysis.

03

## Database Loading

Loading processed data into MySQL for efficient storage.

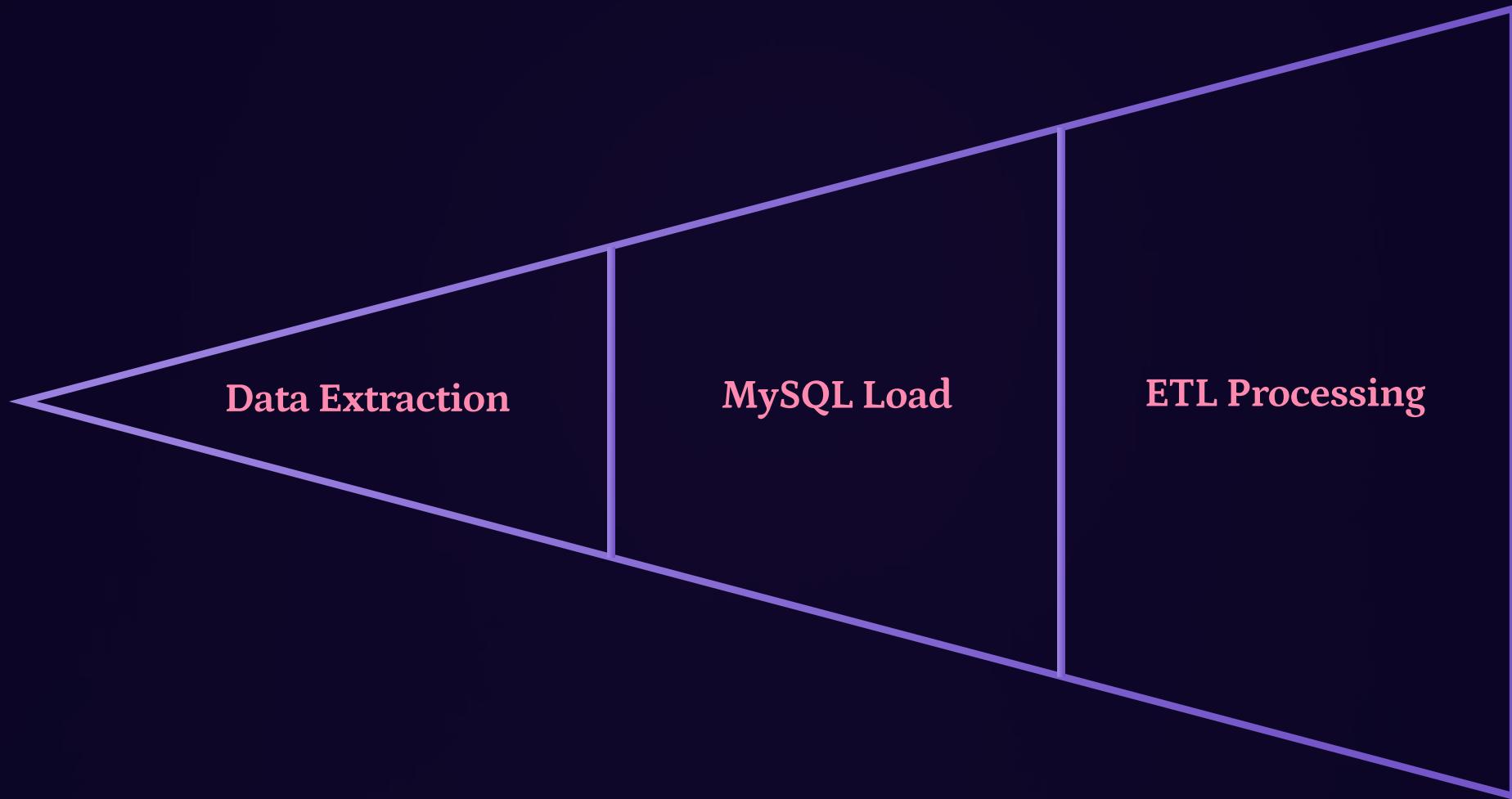
04

## Power BI Visualization

Creating interactive dashboards for actionable insights.

# The Analytics Pipeline

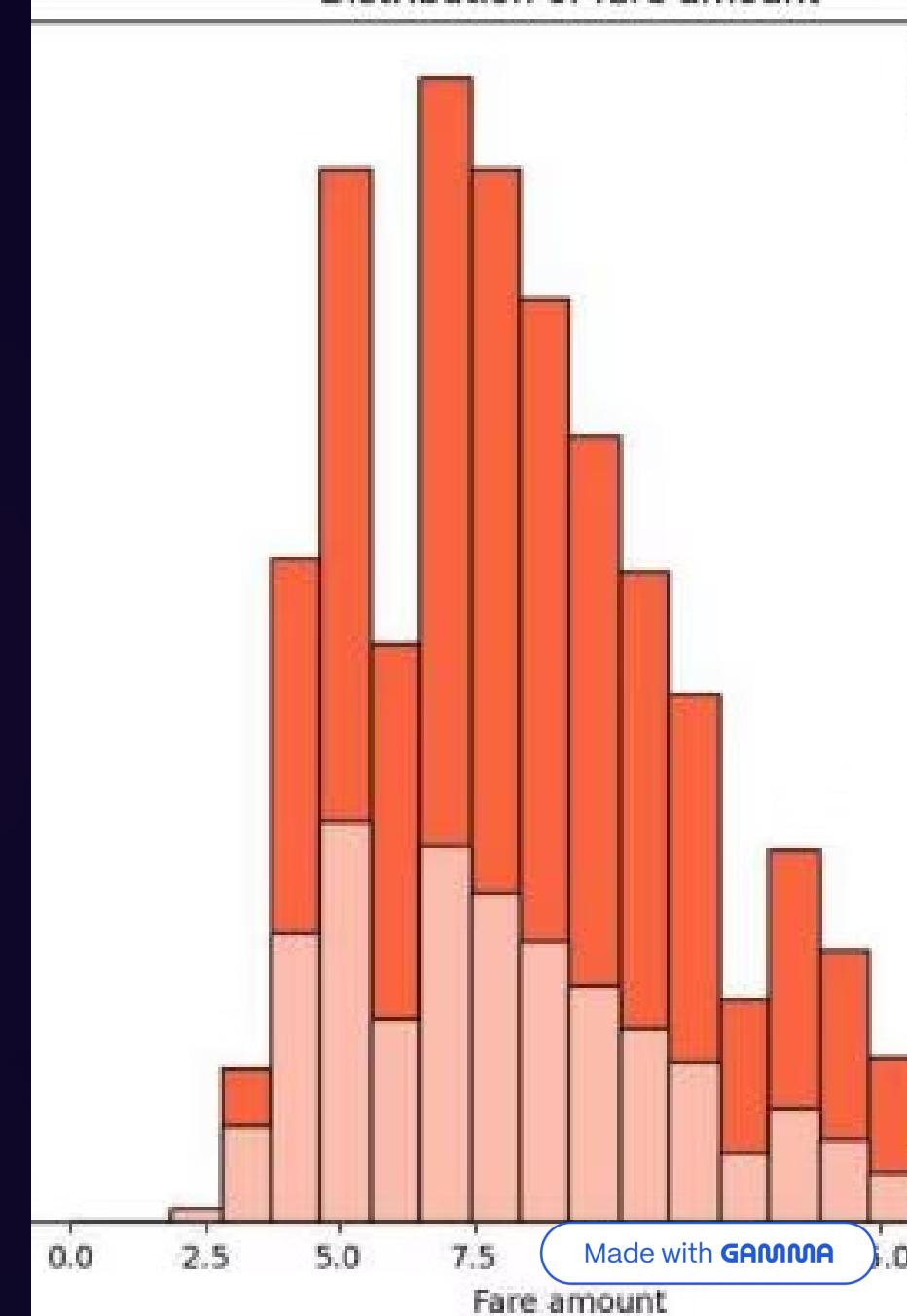
Our goal is to build a robust analytics pipeline, easily adaptable for your own business data.



## Fare Amount Distribution

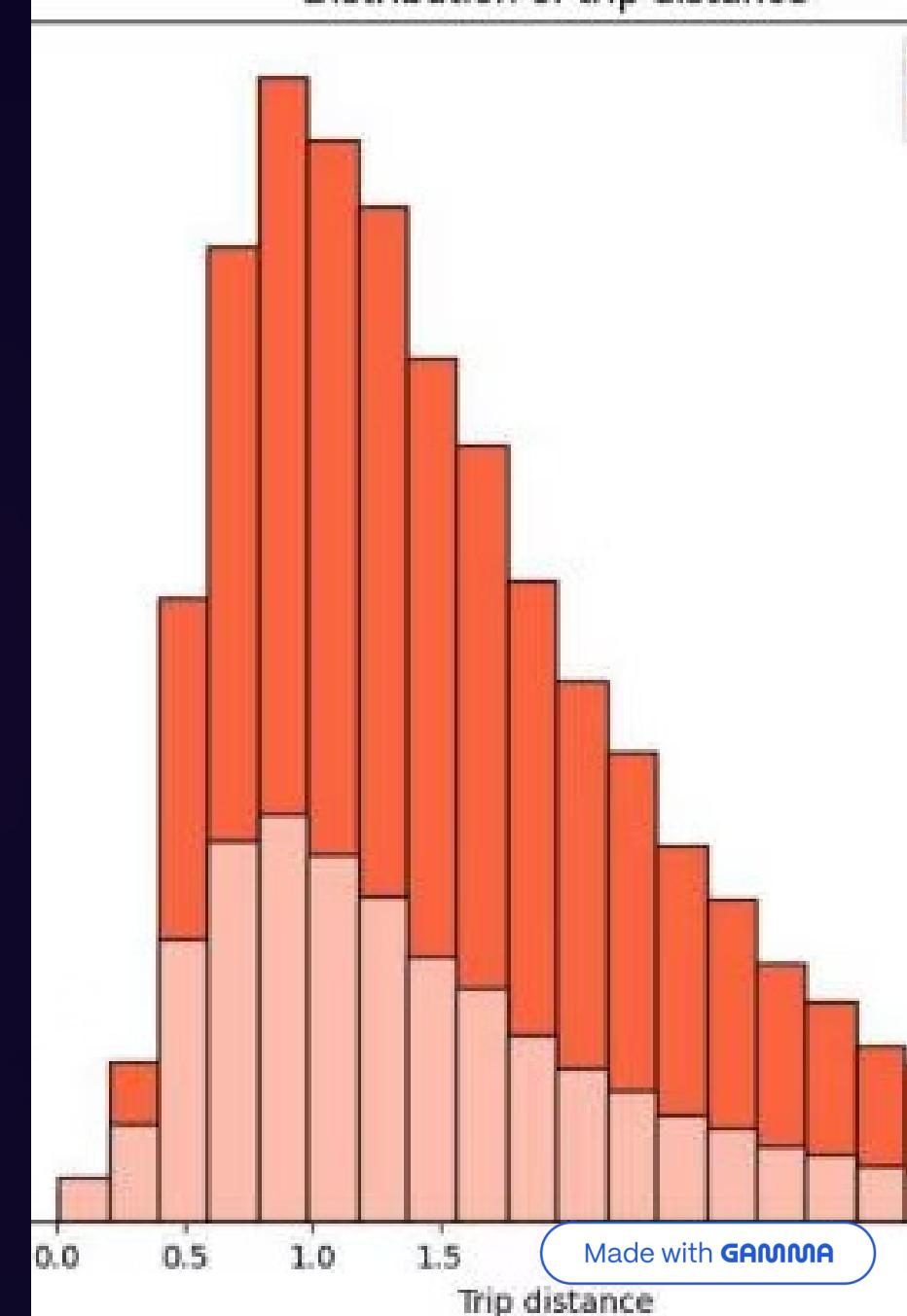
The distribution of fare amounts is bimodal, peaking around \$5.0 and \$7.5.

Card payments are significantly higher in the upper fare ranges.

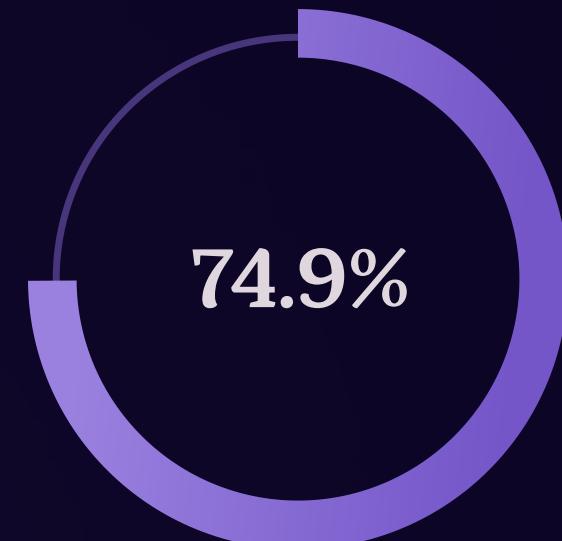
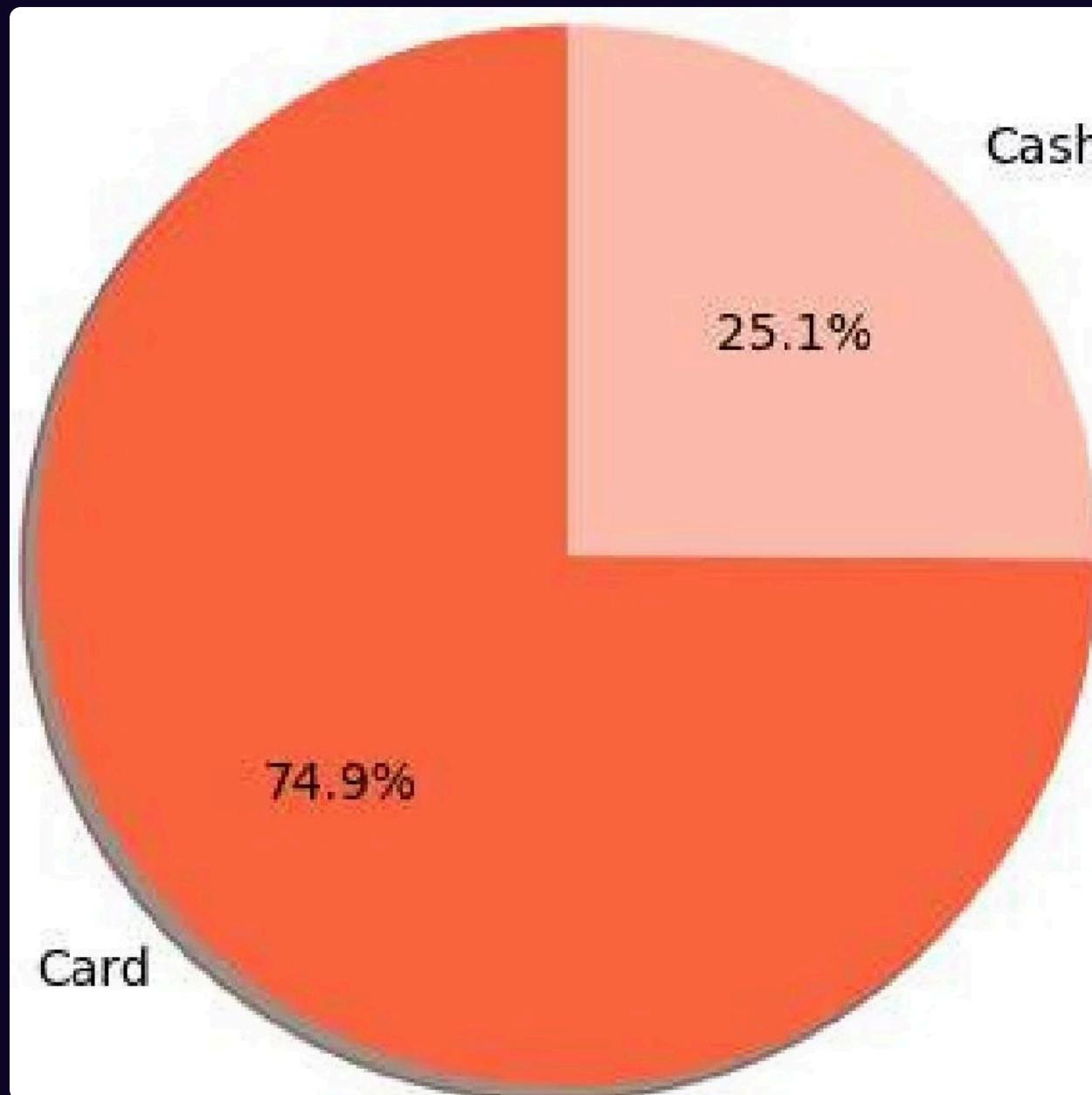


# Trip Distance Distribution

Trip distances are highly skewed right, with a peak between 1.0 and 1.5 miles. Card payments dominate longer trip distances.

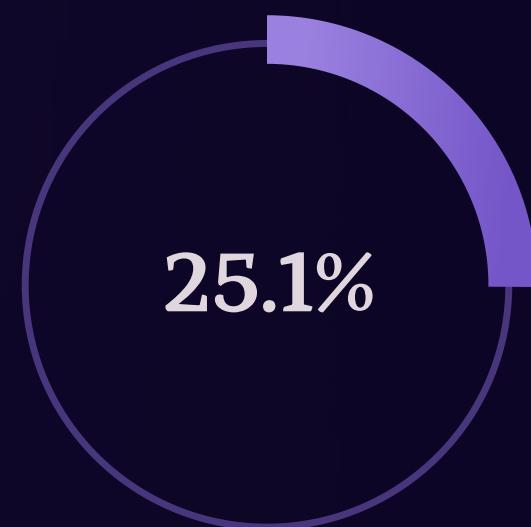


# Payment Type Breakdown



**Card Payments**

The preferred method for customer transactions.



**Cash Payments**

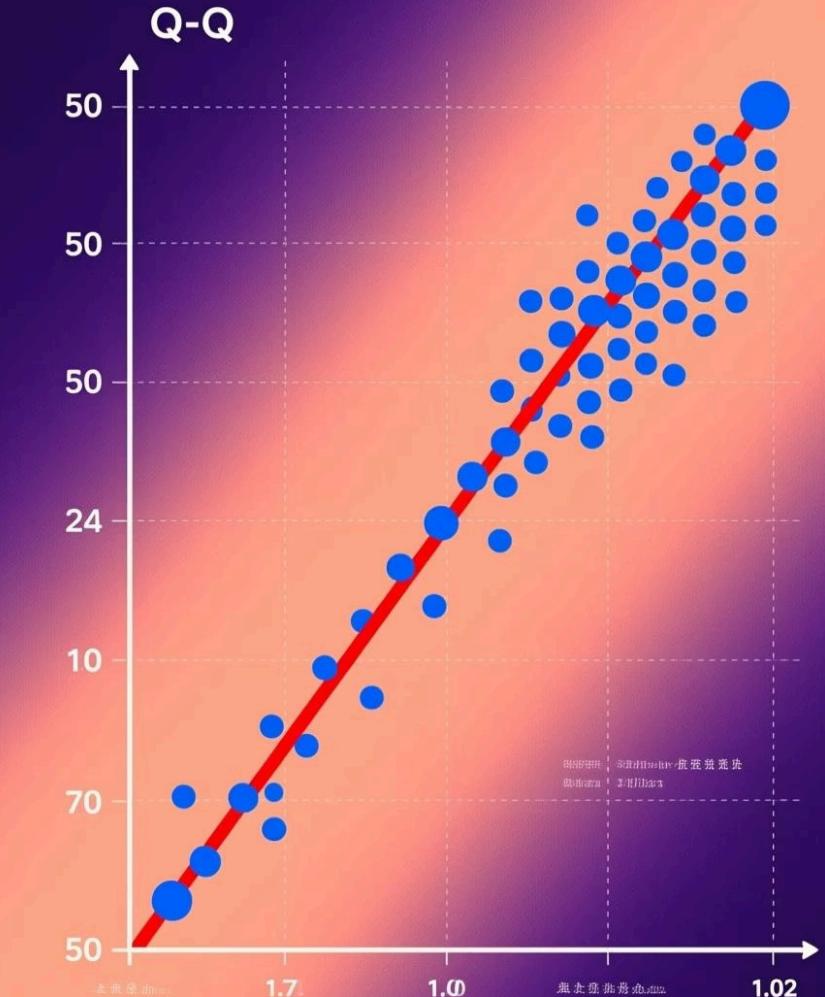
A smaller, but still significant, portion of transactions.

## Payment Type Across Categories

Card payments consistently show higher values across all five categories, especially in Category 1, highlighting its prevalence.

# Quantile-Quantile Plot Analysis

The Q-Q plot indicates a good fit to theoretical quantiles, but with noticeable deviation in the upper right, where sample quantiles are consistently higher.



# Key Insights: Customer Payment Behavior

## Card Dominance

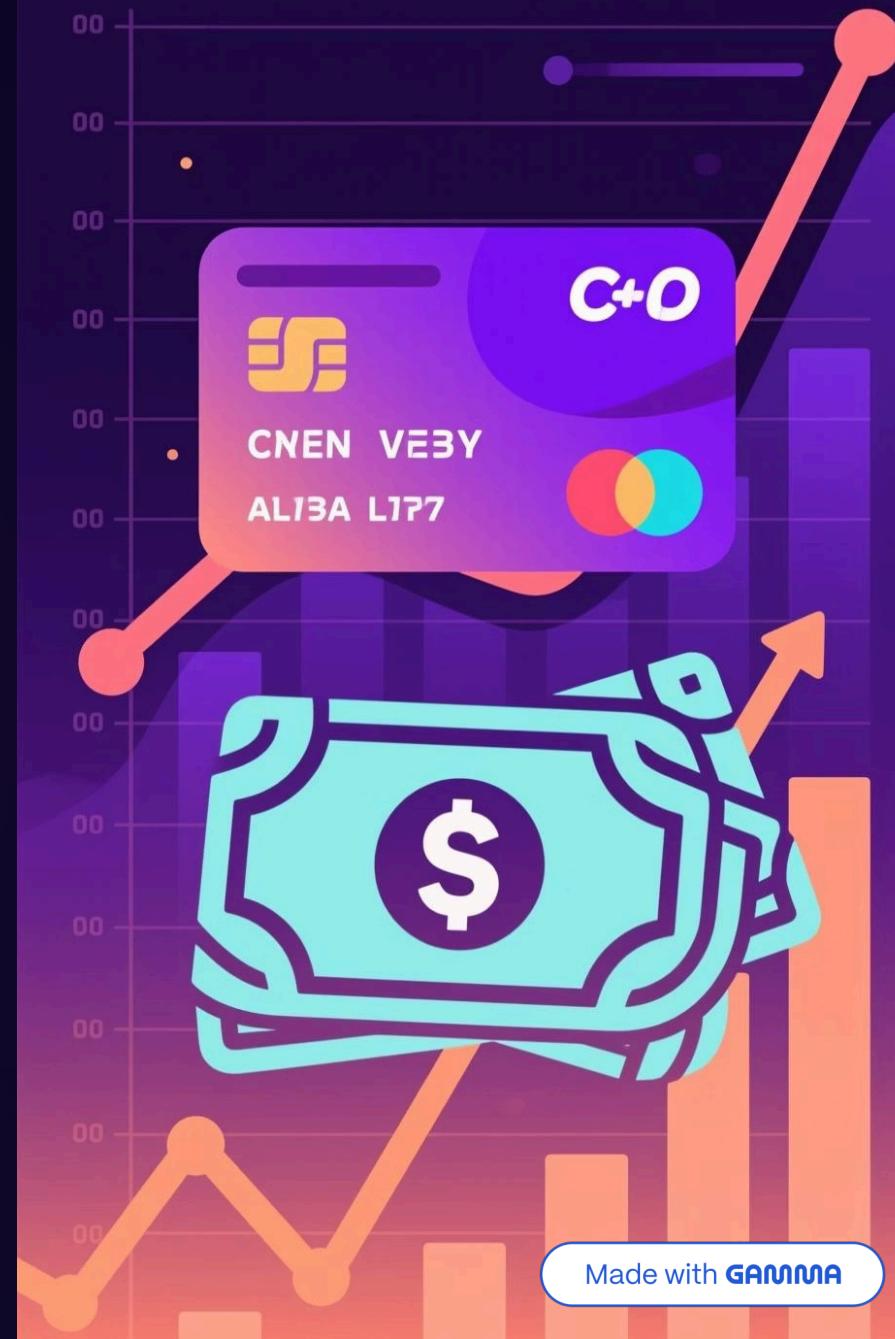
Card payments are significantly more frequent, especially for higher fare amounts and longer trip distances.

## Bimodal Fare Distribution

Fare amounts peak at two distinct points, suggesting different service tiers or customer segments.

## Skewed Trip Distances

Most trips are short, with a rapid decline in frequency as distance increases.



# Next Steps: Actionable Strategies



## Optimize Card Processing

Focus on efficient card payment systems given their high volume.



## Tailor Marketing

Develop strategies for different fare amount segments.



## Enhance Short-Trip Services

Improve offerings for the most common trip distances.

