# Fraud Detection Dashboard

## Objective

The Fraud Detection Dashboard project was developed to enhance the detection and analysis of financial fraud at Commonwealth Bank. The primary focus was to use data visualization techniques to analyze a dataset of transactions, identify patterns and trends, and detect potential fraudulent activities. This project aids in protecting the bank's customers and assets by providing actionable insights into suspicious transactions.

### Skills Learned

- Proficiency in using Splunk for data ingestion, analysis, and visualization.
- Enhanced ability to identify and interpret patterns in transactional data.
- Experience in building interactive dashboards for monitoring and reporting.
- Advanced understanding of financial fraud detection techniques.
- Critical thinking and problem-solving skills in cybersecurity contexts.

### Tools Used

- **Splunk Enterprise**: For data ingestion, analysis, and visualization.
- **Prepared Data**: Dataset provided by the Fraud team, including transaction details like Customer ID, Age, Gender, Merchant, Category, Amount, and Fraud status.

## Steps

1. **Data Preparation**: Imported the provided dataset into Splunk, analyzed the fields, and prepared the data for visualization.
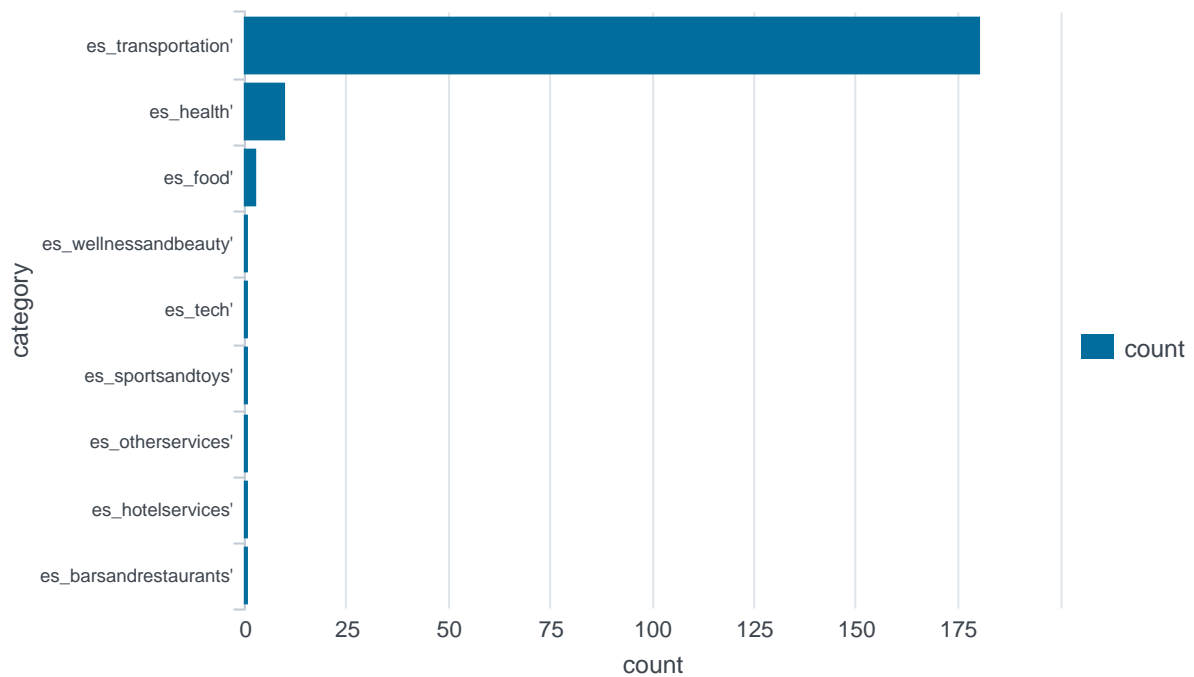
## Chart 1

Count by Category
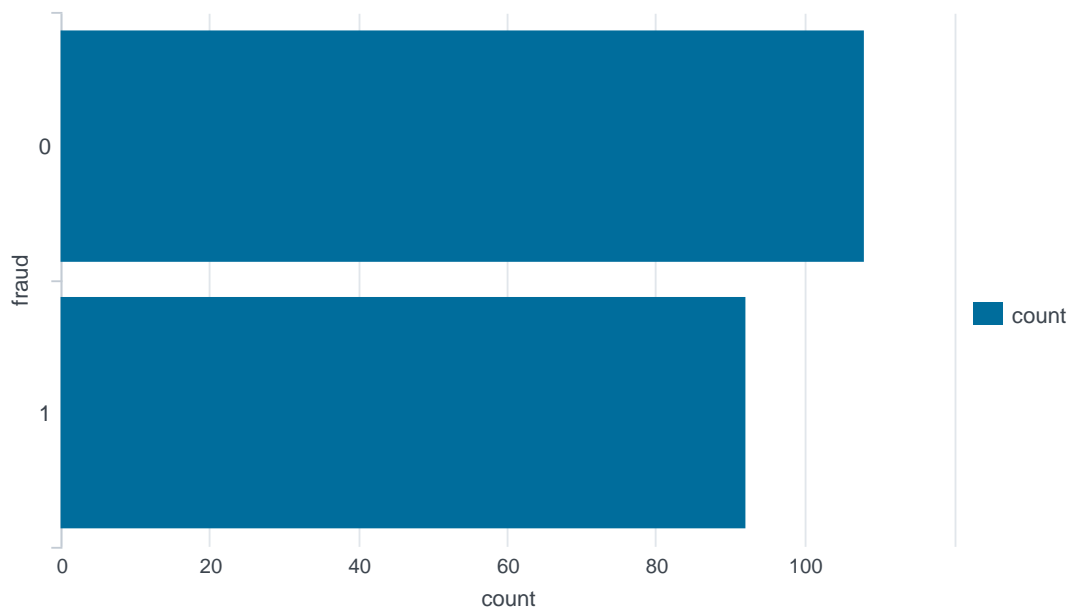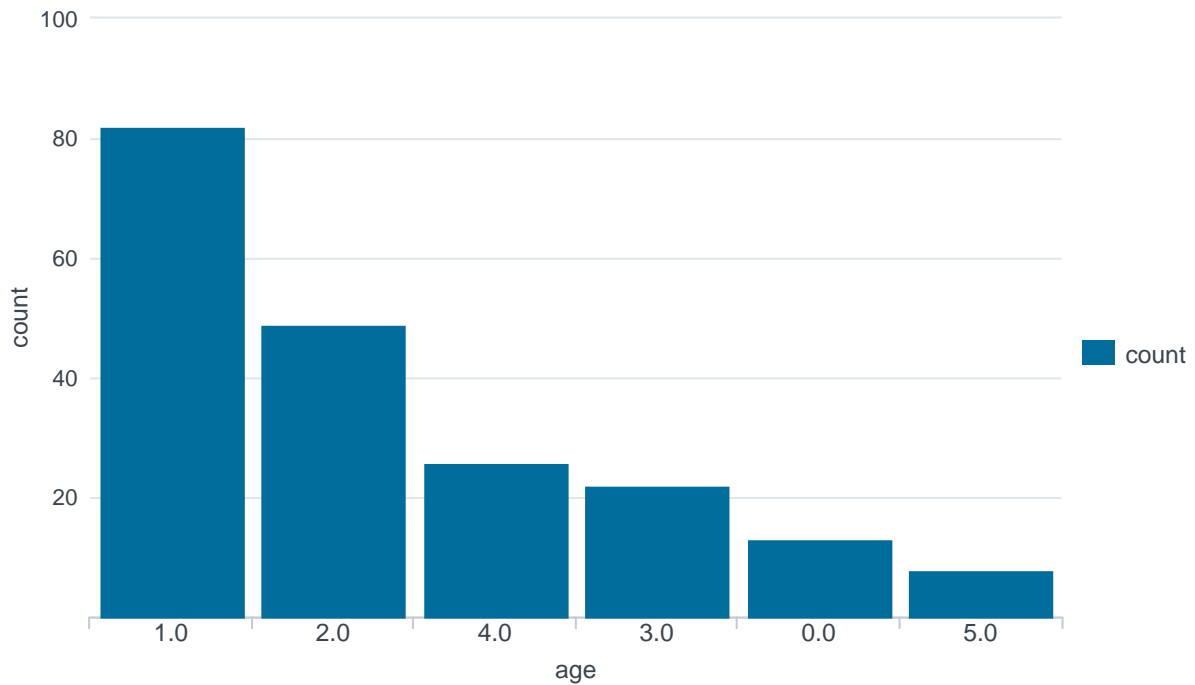


## Chart 2

Count of Fraudulent Payments

## Chart 3

### Count by Age



## Chart 4

### Count by Merchant
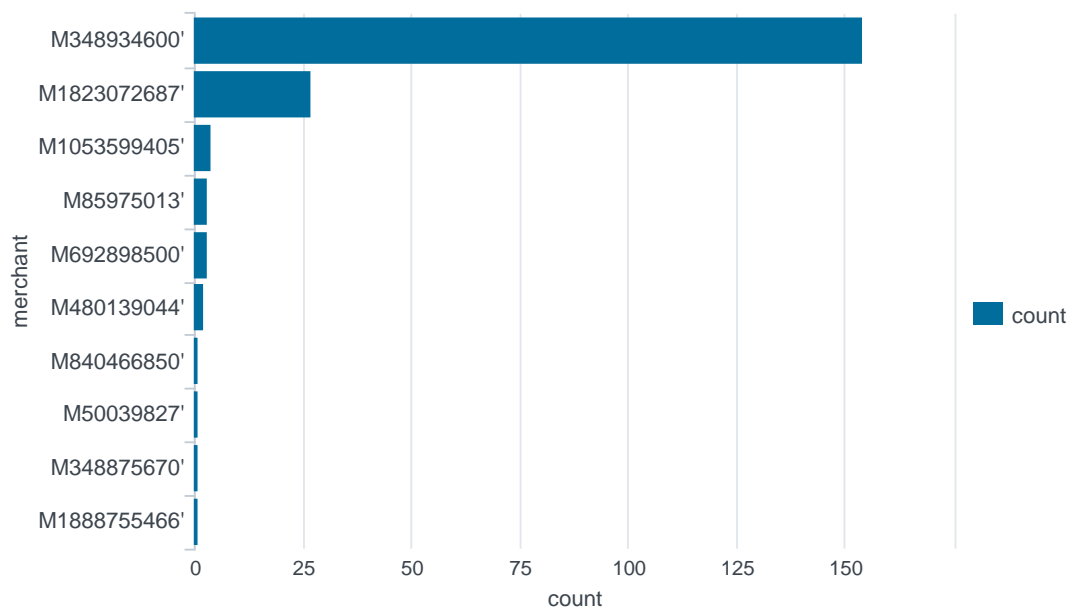
# Chart 5

Fraudulent Transactions by Age (Table)

| Age | Fraud | count |
|---|---|---|
| 0.0 | 0 | 5 |
| | 1 | 8 |
| 1.0 | 0 | 44 |
| | 1 | 38 |
| 2.0 | 0 | 25 |
| | 1 | 24 |
| 3.0 | 0 | 14 |
| | 1 | 8 |
| 4.0 | 0 | 14 |
| | 1 | 12 |
| 5.0 | 0 | 6 |
| | 1 | 2 |

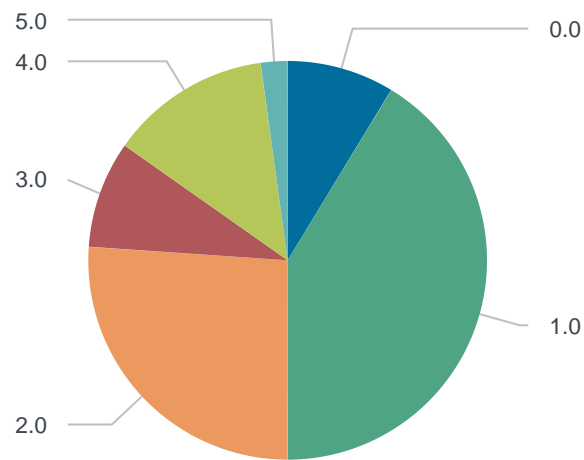# Chart 6

Fraudulent Transactions by Age (Chart)

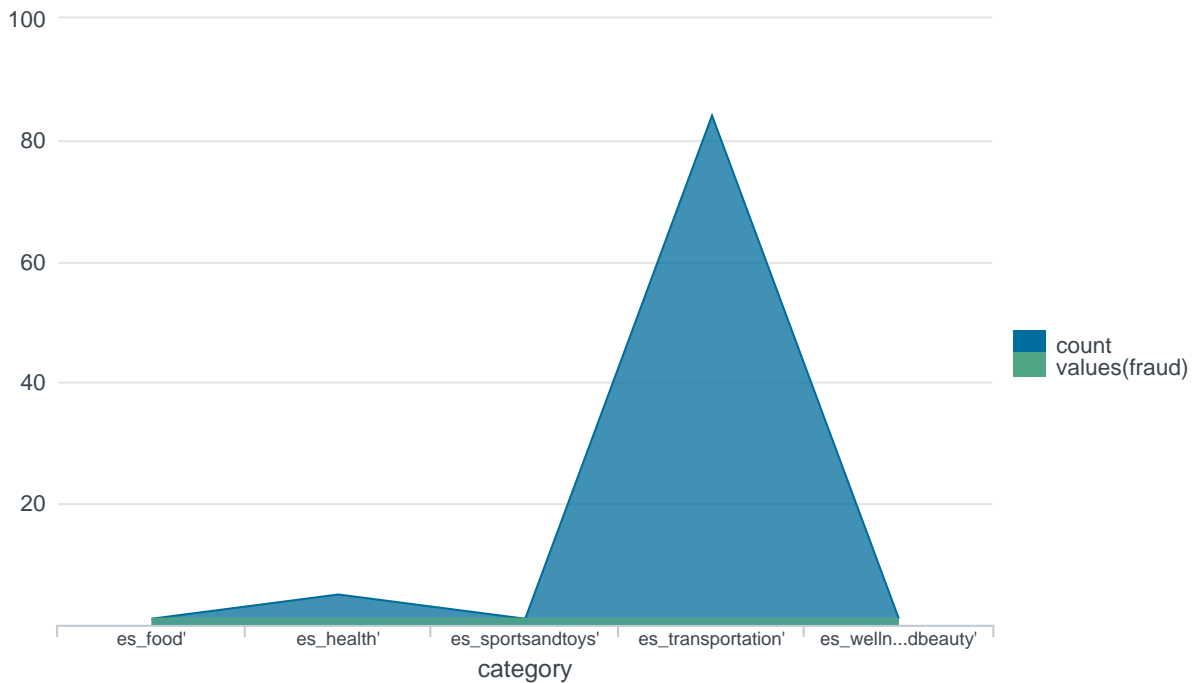## Chart 7

Fraudulent Transactions by Category



## Chart 8

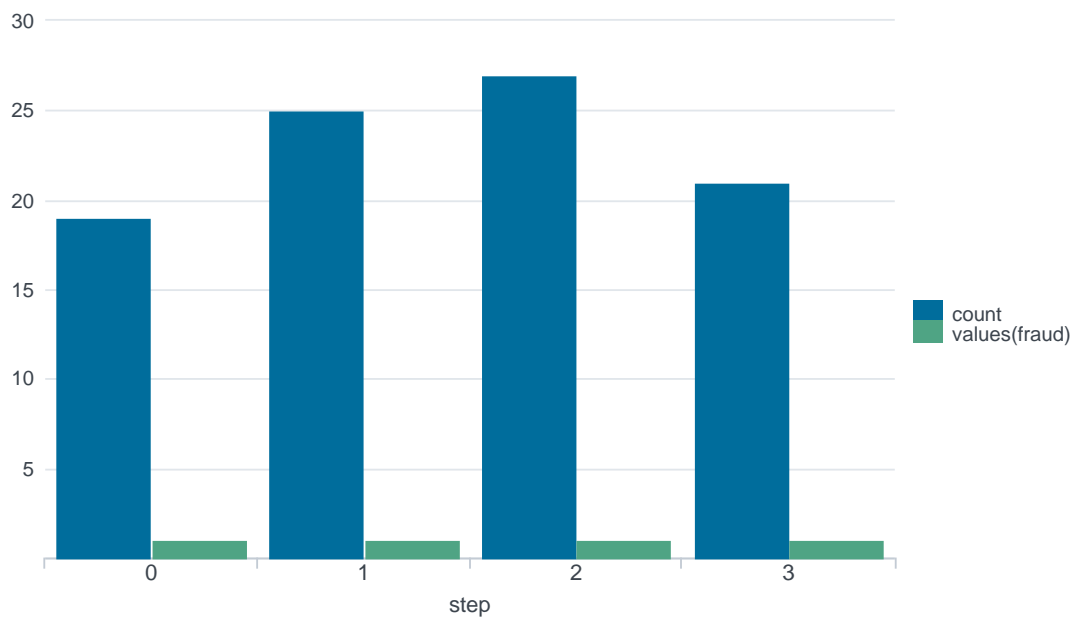Fraudulent Transactions by Step (Month)

## Chart 9
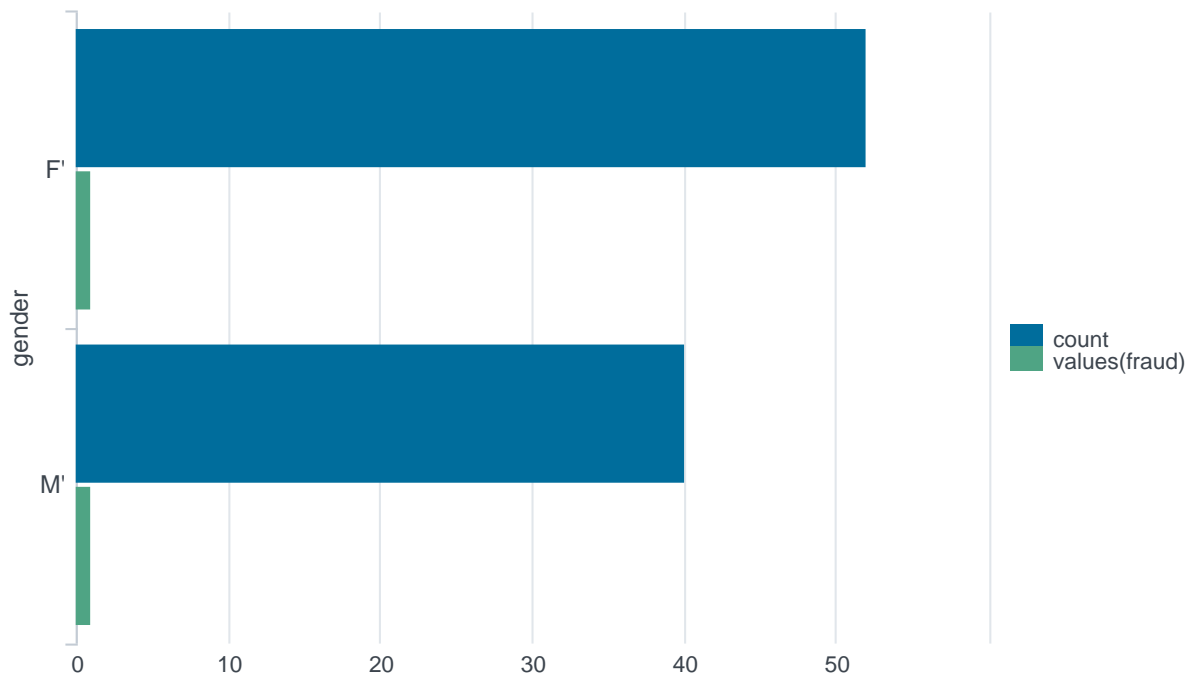
Fraudulent Transactions by Gender



## Chart 10

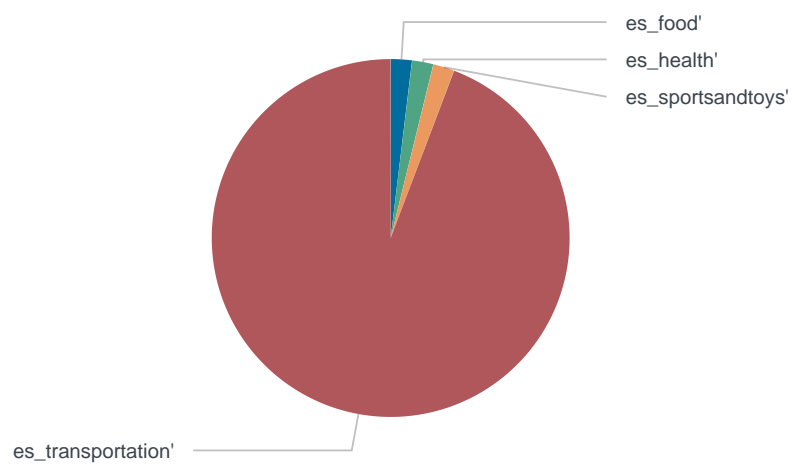Gender with the most fraudulent activity (female) by Category

## Chart 11

Age group with the most fraudulent activity (1.0 = 19 - 25) by Merchant

M692898500'

M1823072687'

M348934600'