Service Analysis

Service and Customer Analysis Report

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Problem Statement

The bike servicing company needed to enhance inventory management and operational efficiency by addressing demand trends, optimizing stock levels, and improving mechanic performance and customer retention.
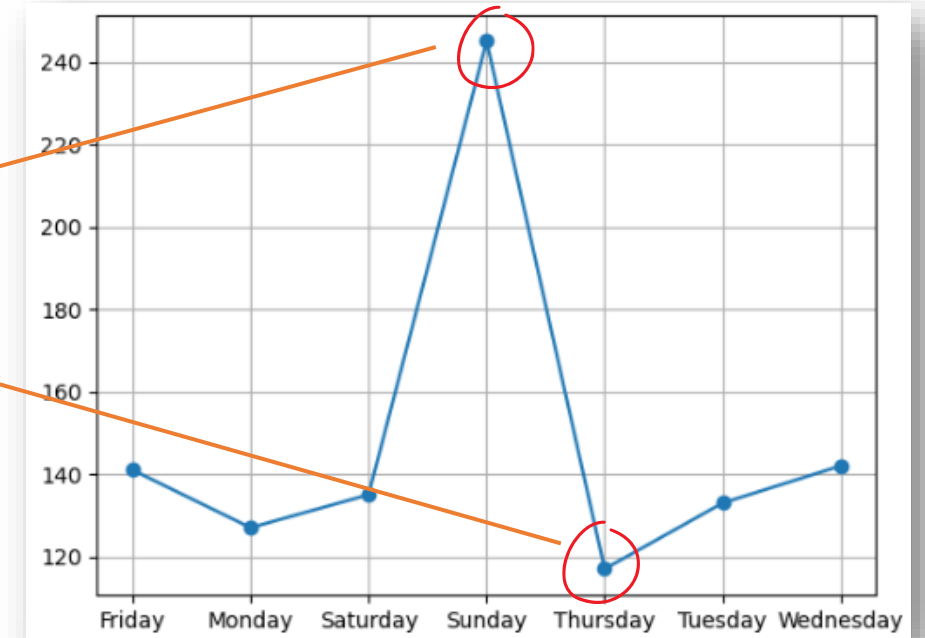
Key Issues:

- Predicting parts usage to minimize inventory holding time.

- Optimizing inventory levels based on demand forecasts.

- Identifying spending trends to develop strategies for customer retention.

Service Distribution Across Days of the Week

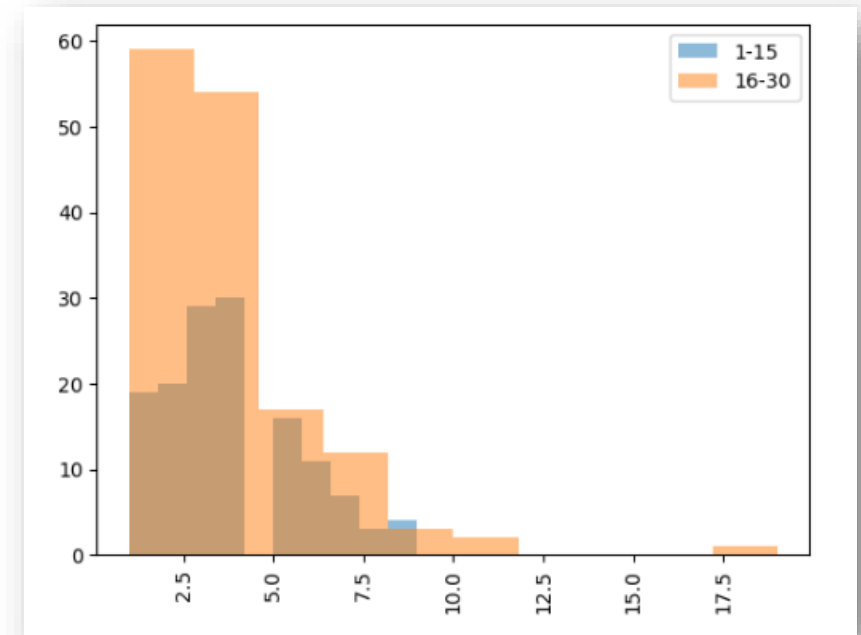Sunday has the highest number of customers

Thursday has the lowest number of customers

Service Distribution by Bi-Monthly Periods

The chart displays customer counts for two halves of the month, with data for the 1st and 16th plotted at the same position.
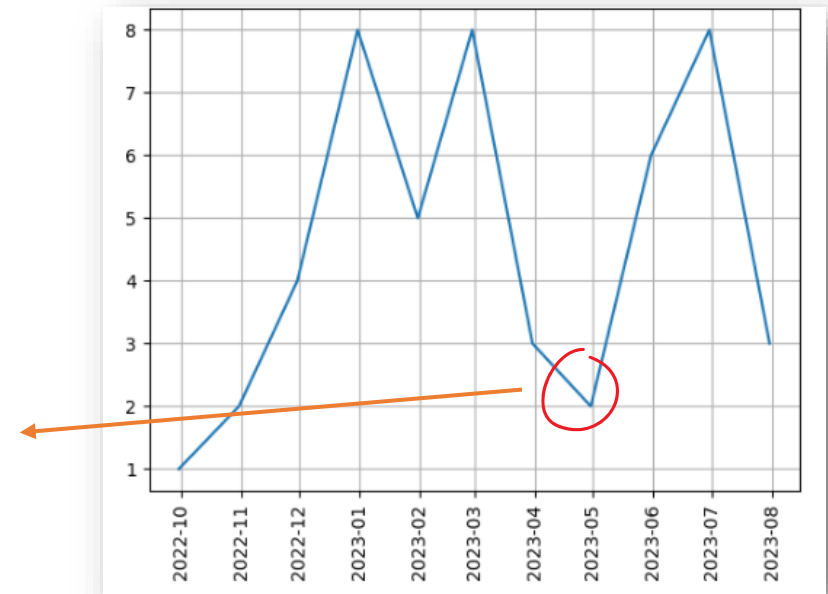
There are more customers in the second half of the month compared to the first half

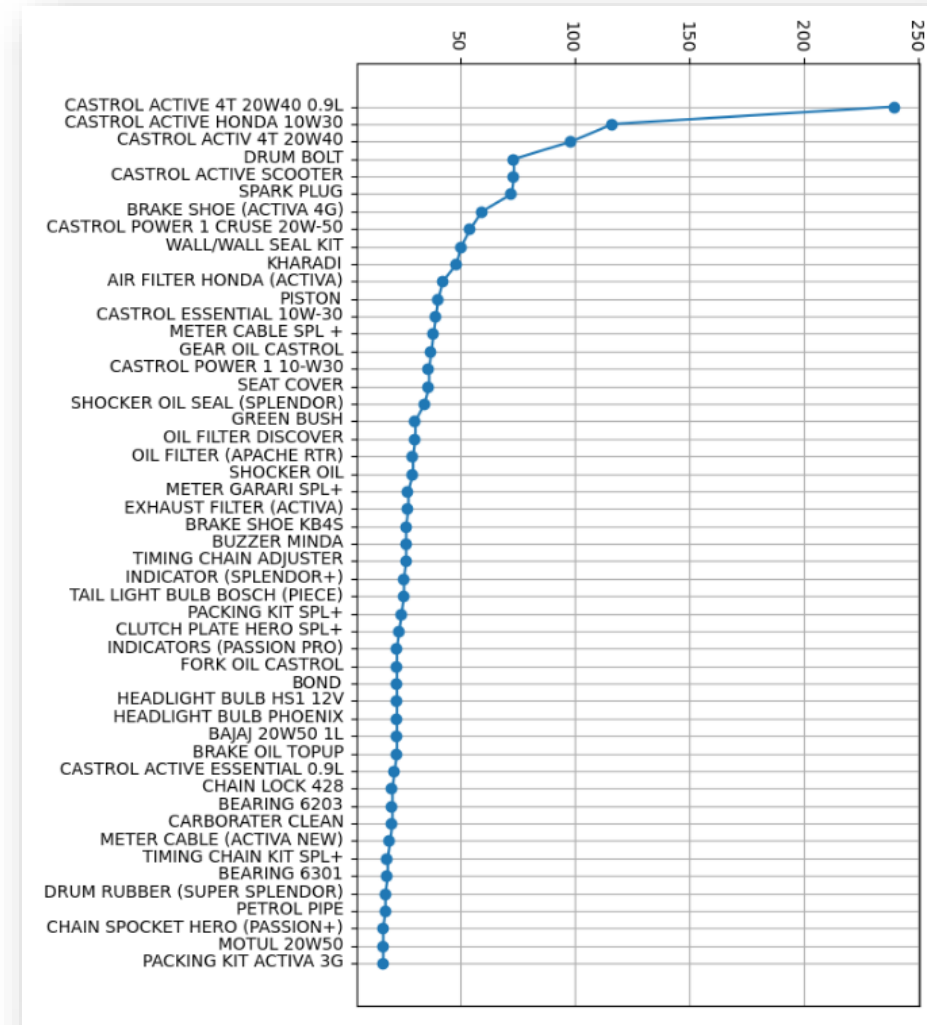The chart shows the number of engine repairs performed over time

May 2023 shows a sharp decline in engine repairs

Item Usage Count

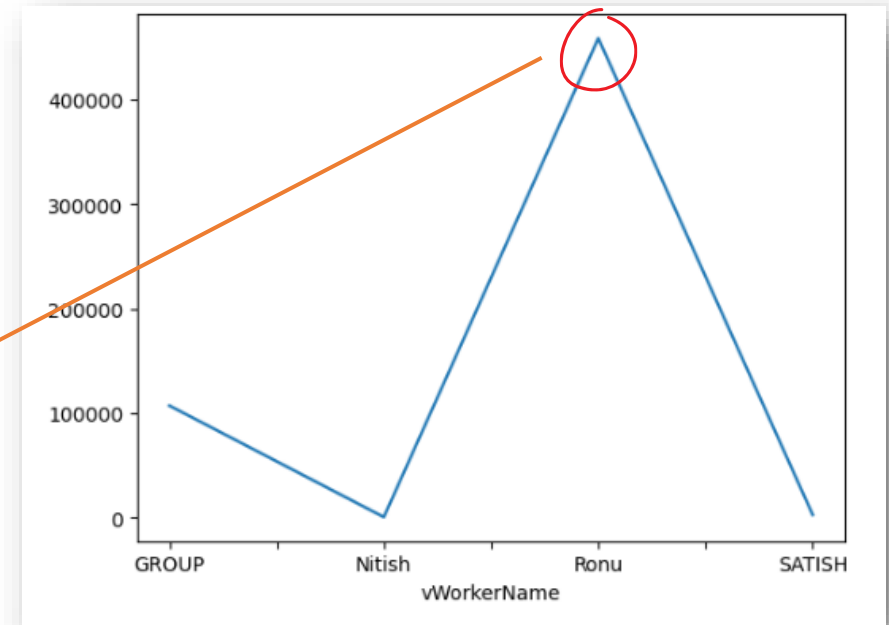The Chart Displays the Most Used Items for Inventory Optimization

Engine Oil, **Spark Plugs**, and **Drum Bolts**
Appear to Be the Most Used Items Overall
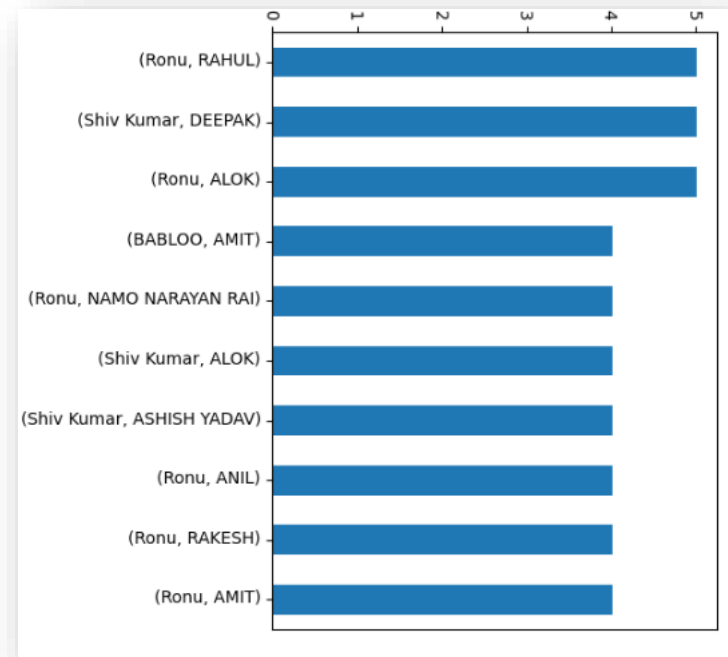
Labor Charges Generated by Each Mechanic

The Least Labor Charges Generated by Nitish and Satish (Newly Joined)

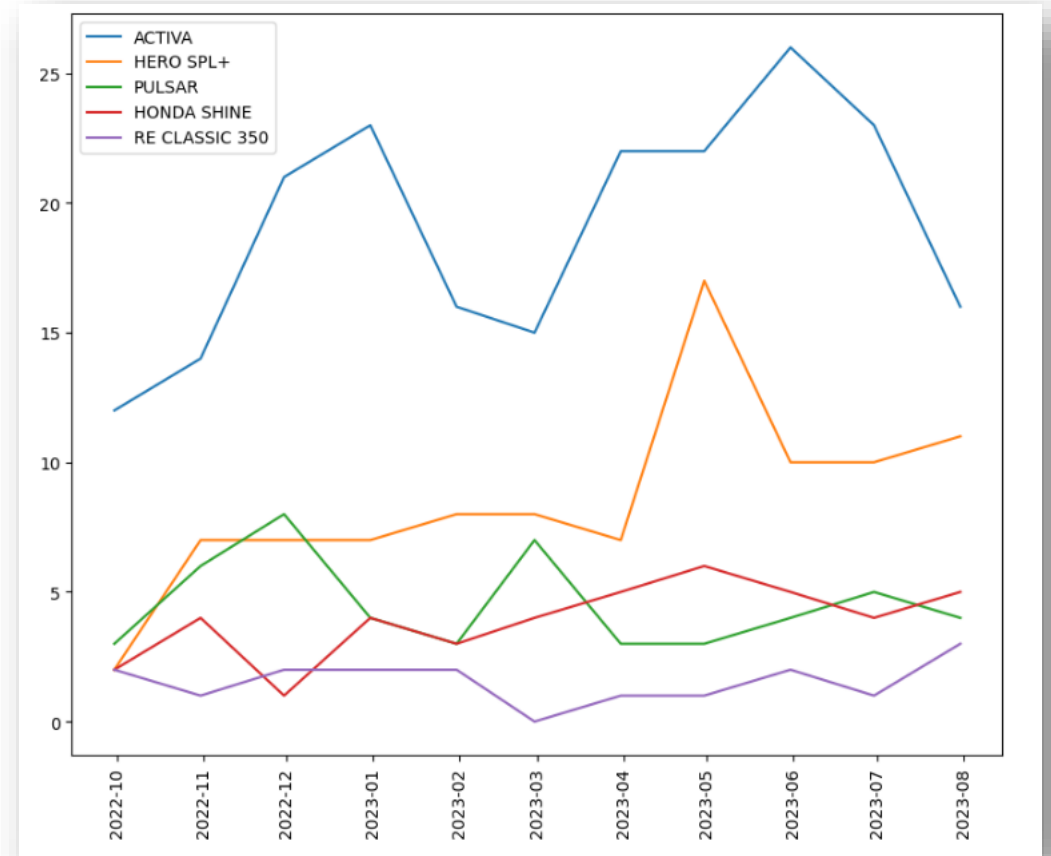Highest Labor Charge Generated by Ronu (Head Mechanic)

Mechanic-wise Customer Return Frequency

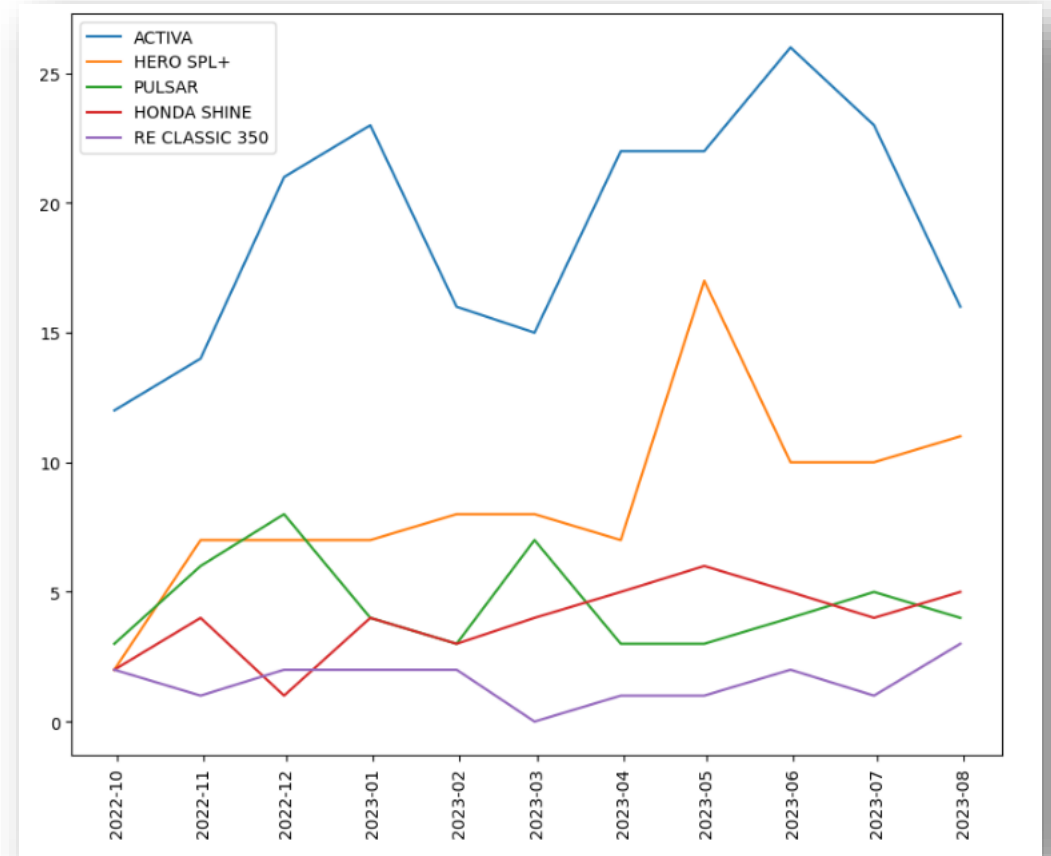**Ronu** is the Mechanic with the **Most Returning Customers**

Top 5 - Bike Service Count by Model

Activa is One of the Most Serviced Vehicles, Followed by Hero SPL+ and Pulsar
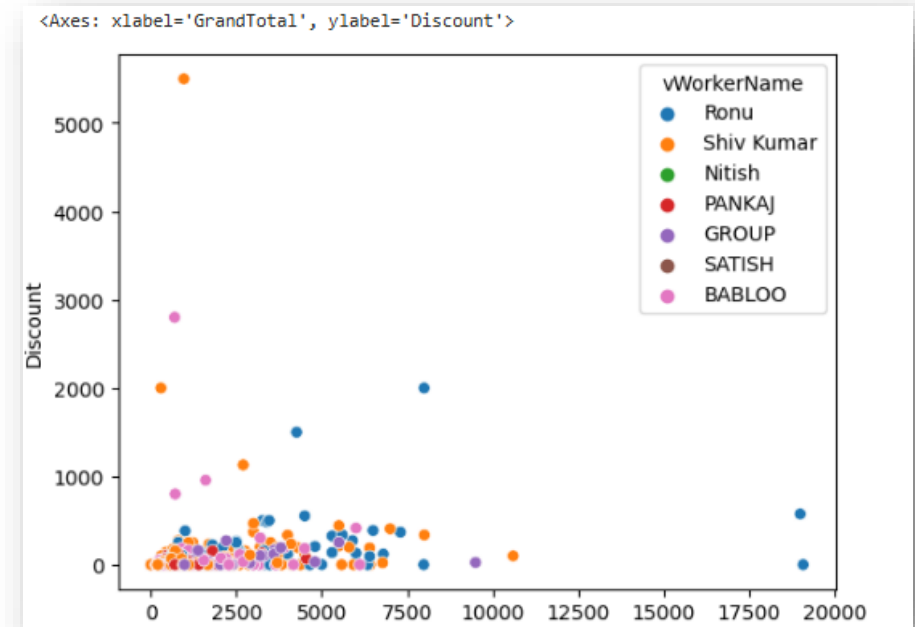
Top 5 - Bike Service Count by Model

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Service Price vs Discount: Scatter Plot

Highest Discount Offered by Mechanics Compared to the Total Bill

Impact

Customer Analysis: Found top spenders and identified valuable customers using payment data.

Parts Usage Prediction: Analyzed historical data to predict bike parts demand, ensuring stock availability.

Inventory Optimization: Adjusted inventory levels to reduce parts' stock duration by over 5 days.

Outcome: Improved business efficiency by identifying high-value customers, optimizing inventory, and recognizing top-performing mechanics.