

Car Sales Analysis
Technical Stakeholder Report
Written by Tolulope Olarewaju
3rd June 2024

Table of Contents

Executive Summary	3
Introduction	3
Purpose:	3
Scope:	3
Background:	3
Methodology	3
• Data Source:	3
• Tools Used:	3
Slicers Applied:	3
Visuals Created:	4
Findings	6
Top Performing Models:	6
Underperformers:	6
Retention Percentages:	6
Deep Questions & Insights:	6
Discussion	7
Recommendations	7
Conclusion	7

Executive Summary

This report provides a detailed technical overview of a dashboard analyzing car sales, performance, and value retention using a dataset provided on the IBM Data Analyst Professional Certificate course. The analysis was done using only Microsoft Excel pivot tables, pivot charts, and slicers. The focus is on Toyota models and five selected manufacturers. Key insights include identifying high-performing models in terms of price, resale value, and sales; retention percentages; and performance efficiency. The findings support performance evaluation, market trends, and strategic decision-making.

Introduction

Purpose:

To analyze and present actionable insights from car sales data with emphasis on performance, retention, and sales metrics of Toyota models and selected manufacturers.

Scope:

Covers performance evaluation, resale values, unit sales, power efficiency, and retention rates. The scope excludes in-depth market forecasting or customer profiling.

Background:

The data is sourced from IBM Data Analyst Certification coursework. The project uses Microsoft Excel only, with pivot tables, slicers, and pivot charts for all visualizations. Focus models include Camry, Corolla, Celica, and Land Cruiser.

Methodology

Data Source: The Dataset provided in the IBM Data Analyst course includes 20+ columns like sales, engine size, horsepower, etc.

Tools Used: Microsoft Excel (Pivot Tables, Pivot Charts, Slicers)

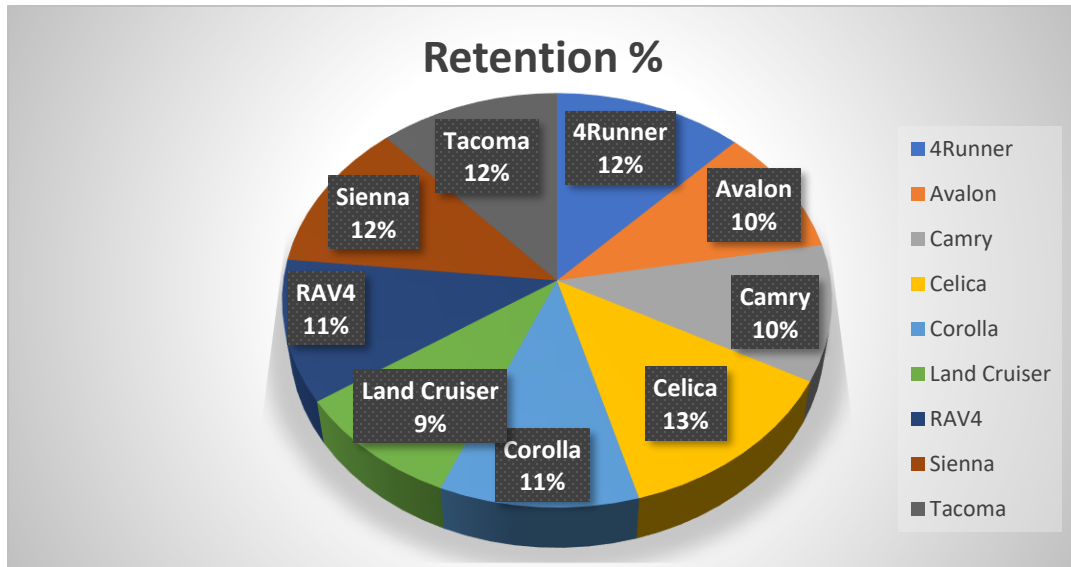
Slicers Applied:

- Manufacturer (multi-selection: Audi, BMW, Porsche, Volkswagen, Mercedes-B)

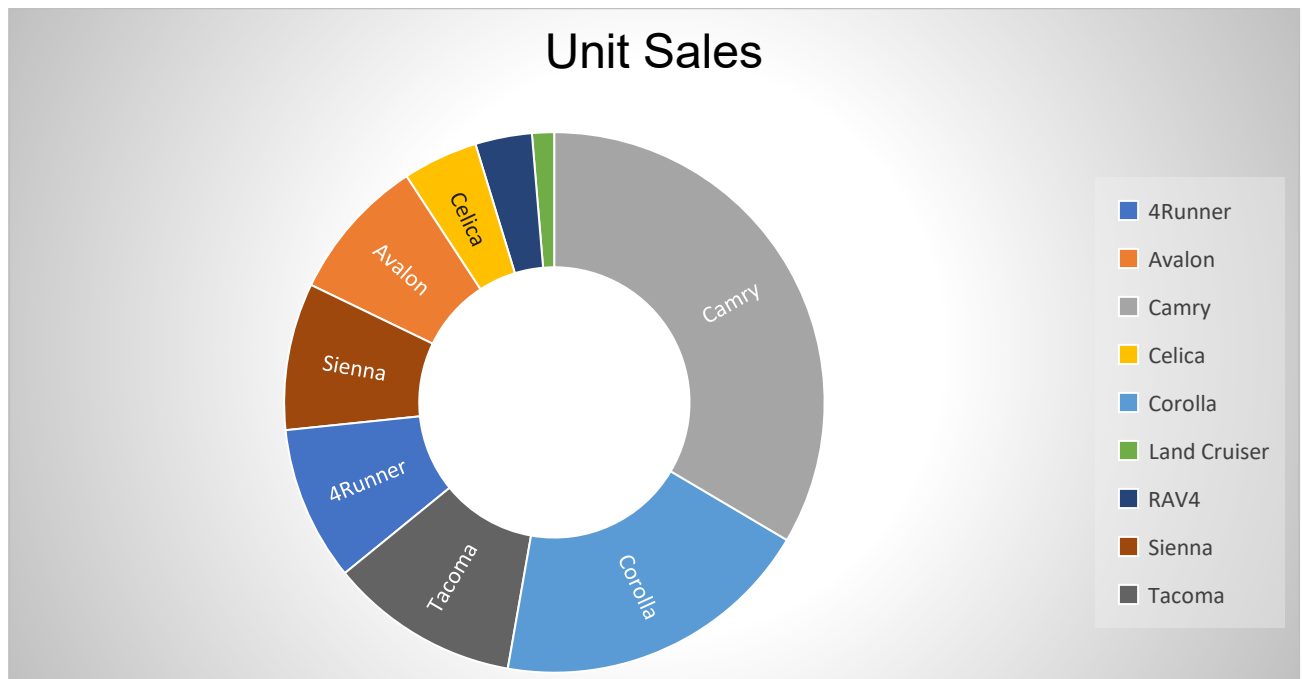
- Model (Toyota models)
- HP Level

Visuals Created:

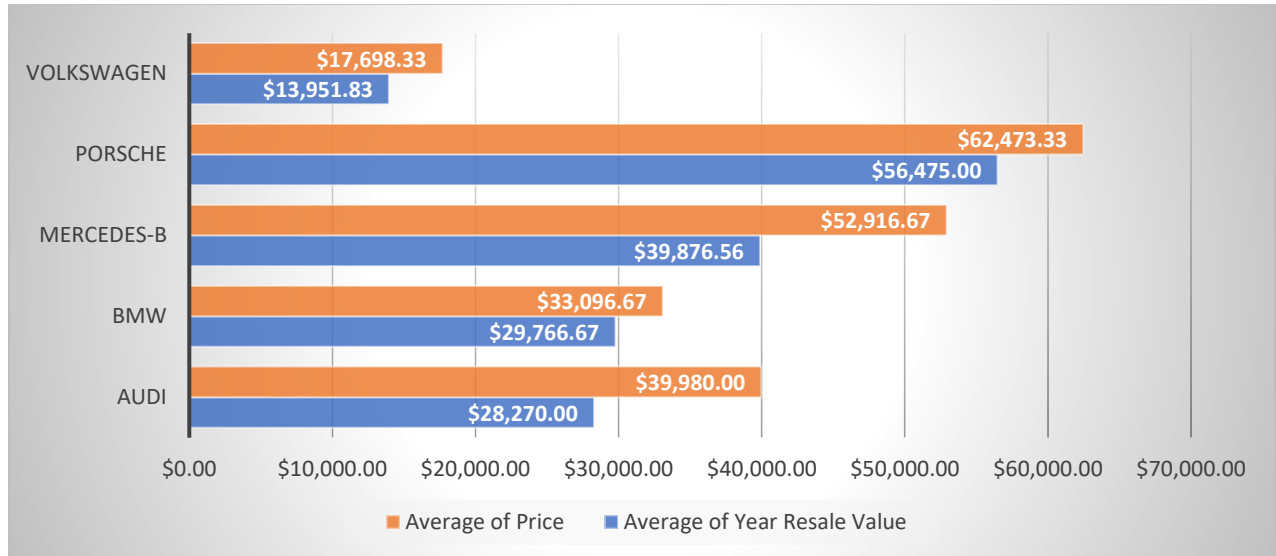
- **Pie Chart** – Retention Percentage (Toyota Models)



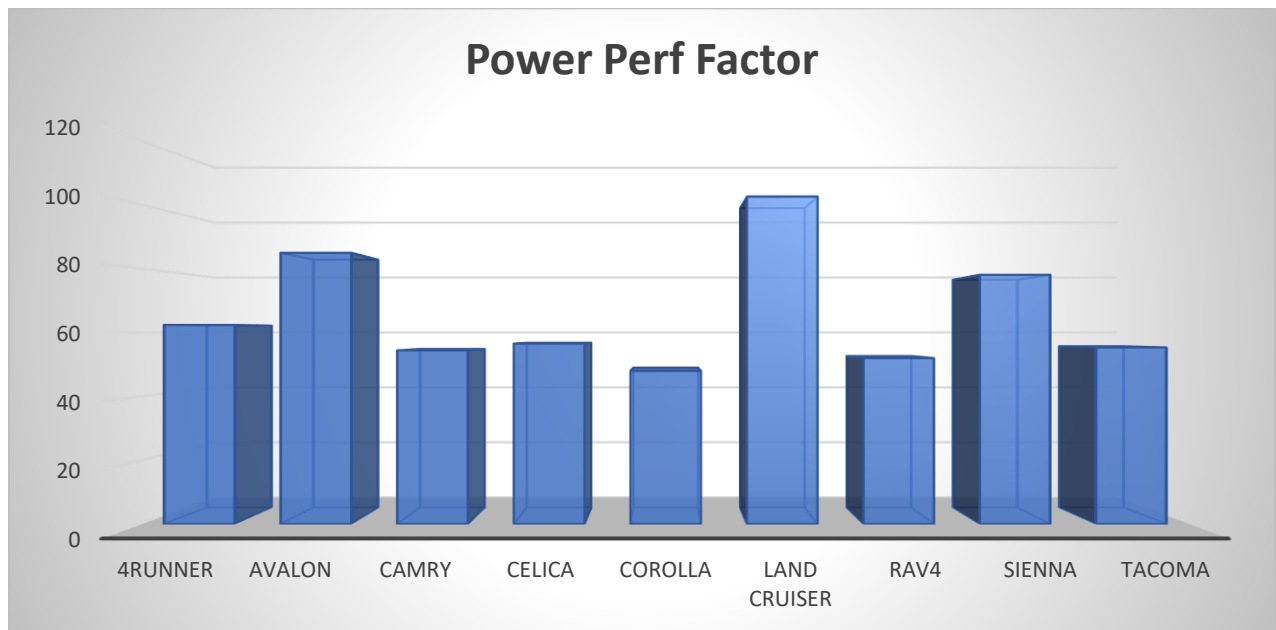
- **Sunburst Chart** – Unit Sales (Toyota Models)



- **Bar Chart** – Avg Price & Year Resale Value (Filtered to 5 Brands)



- **Column Chart** – Power Performance Factor (Toyota Models)



Findings

Top Performing Models:

- Porsche leads in price and resale value (\$62,473.33 and \$56,475.00).
- The Toyota Camry had the highest unit sales (247,994).
- Land Cruiser showed top power performance factor (102.5).

Underperformers:

- Volkswagen had the lowest average price and resale (\$17,698.33 and \$13,951.83).
- Land Cruiser and RAV4 had the lowest sales (9,835 and 25,106).

Retention Percentages:

- Celica had highest retention % (13%).
- Land Cruiser had lowest retention % (9%).

Deep Questions & Insights:

1. **Which Toyota model offers the best performance-to-price ratio?**
Land Cruiser ranks highest in power performance but lowest in retention and sales, indicating strong engineering but weak market appeal.
 2. **How do Toyota models differ in value retention?**
Celica retains its value best, showing its desirability in the used car market. Land Cruiser lags despite performance.
 3. **What are the trends in sales volume across Toyota models?**
Camry and Corolla dominate unit sales, highlighting consistent demand. RAV4 and Land Cruiser have the least training.
 4. **How do premium brand cars compare with Toyota in terms of pricing and resale?**
Porsche and Mercedes-B significantly outprice Toyota models and show high resale values, pointing to a niche high-value customer base.
-

Discussion

The visuals and pivot-based analysis reveal disparities between model performance and market behavior. Camry and Corolla stand out in unit sales, whereas high-performance models like the Land Cruiser underperform in market retention. Premium brands show clear dominance in pricing but cater to different segments.

Recommendations

- Promote high-retention models (e.g., Celica) in resale campaigns.
 - Reassess pricing/marketing strategy for high-performance yet low-retention models like Land Cruiser.
 - Use insights to refine pricing strategies when competing with premium brands.
-

Conclusion

Using Microsoft Excel's built-in tools, pivot tables, slicers, and charts this project highlights strategic insights into Toyota's performance and market trends. These findings support marketing, pricing, and product positioning decisions within a competitive vehicle market.
