### Finalized Research Questions for PakWheels.com

Medium article link: https://medium.com/@ahmedmuneeb013/7da6a938f859

### Research Question 1: What Key Factors Drive Used Car Resale Values in Pakistan?

#### Inference

- Identify the most influential features affecting resale prices (mileage, age, brand, model, engine specifications)
- Uncover market patterns to optimize pricing strategies for buyers and sellers

### **Sub-Questions**

- What is the correlation between vehicle age and resale value?
- How significantly does mileage impact the final selling price?
- To what extent does vehicle body type influence market value?
- What price variations exist between different fuel types and engine capacities?
- How does the seller's status (Individual vs. Dealer) affect the final price?
- Is there a difference in demand for newer vs. older models?

# Research Question 2: Do Certain Car Brands Retain Their Value Better Over Time Compared to Others?

#### Inference

- Compare depreciation rates across different automotive brands
- Evaluate the relationship between brand reputation and value retention
- Identify brands offering optimal long-term investment potential

### **Sub-Questions**

- Which manufacturers show the strongest resistance to depreciation?
- Do domestic cars retain value differently compared to imported cars in Pakistan?
- What is the relationship between user reviews and brand value stability?
- How do different models within the same brand compare in value retention?

## Research Question 3: Is There a Regional Variation in Car Prices or Preferences in Pakistan?

### Inference

- Identify if car prices vary significantly across different regions in Pakistan
- Understand regional differences in preferences for car types, brands, or models

### **Sub-Questions**

- Do average car prices differ significantly across various regions or cities in pakistan?
- What are the regional preferences for car types (e.g., Sedan, SUV, Hatchback)?
- Which brands or models are more popular in specific regions?
- How does regional economic status influence car prices and preferences?

### Research Question 4: What Drives Customer Satisfaction in Vehicle Reviews?

### Inference

- Identify the primary factors influencing user satisfaction (comfort, efficiency, performance, value, aesthetics)
- Quantify the impact of each factor through statistical analysis

#### **Sub-Questions**

- Which rating categories best predict overall customer satisfaction?
- What insights from user review texts correspond with high or low overall ratings?
- Can a predictive model accurately determine overall satisfaction based on given factors?
- How do helpful votes impact the perception of reviews and overall satisfaction?

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