### CODED PROJECT

### Business reports

PREPARED BY Manya verma INDEX

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### Introduction

Austo Motor Company, known for its excellence in producing SUVs, sedans, and hatchbacks, has recently raised concerns about the efficiency of its current marketing campaigns. The company aims to enhance customer engagement and experience by understanding the underlying patterns in customer demand. This report provides a data-driven analysis based on demographic and financial data, offering actionable insights to improve the marketing strategies.

### Objective

The primary goal of this analysis is to examine key customer data attributes such as age, gender, profession, education, loan statuses, partner employment, salary, and other factors that could indicate the demand patterns. By identifying customer segments with higher purchasing potential, Austo Motor Company can tailor its marketing efforts more effectively.

### | Data Overview

The dataset includes information on:

- Age: Customers' age, reflecting different life stages and preferences.
- **Gender**: Male or female customers, highlighting any purchasing differences.
- **Profession**: Categorized as business or salaried professionals.
- **Marital Status**: Whether the customer is married, indicating potential family-based car purchasing decisions.
- **Education**: Postgraduate or graduate level, which could influence purchasing power.
- Number of Dependents: Reflecting family size, which can affect car choices.
- **Personal Loan and House Loan**: Financial obligations that might impact a customer's purchasing power.
- **Partner Working**: Whether the customer's partner is also earning, suggesting household income.
- **Salary**: Annual income, crucial for understanding purchasing capacity.

# Key Insights & Analysis

### Age and Car Preferences

- The dataset shows that customers between the ages of 40-60 years have a higher representation in the data.
- Recommendation: Focus marketing efforts on models like SUVs or family sedans, which typically appeal to middle-aged customers with families.

82]:		Age	Gender	Profession	Marital_status	Education	No_of_Dependents	Personal_loan	House_loan	Partner_working	Salary	Pa
	0	53	Male	Business	Married	Post Graduate	4	No	No	Yes	99300	
	1	53	Femal	Salaried	Married	Post Graduate	4	Yes	No	Yes	95500	
	2	53	Female	Salaried	Married	Post Graduate	3	No	No	Yes	97300	
	3	53	Female	Salaried	Married	Graduate	2	Yes	No	Yes	72500	9
	4	53	Male	Salaried	Married	Post Graduate	3	No	No	Yes	79700	

# Key insight analysis

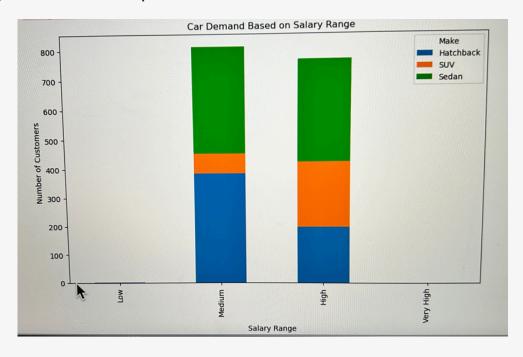
- 2. Gender-Based Demand Patterns
  - The majority of the customer base includes both males and females with salaried professions.
     Gender distribution seems fairly even, with slightly more male customers.
  - Recommendation: Maintain a balanced marketing campaign, ensuring that advertisements are gender-inclusive.

			Durfornian	Marital_status	Education	No_of_Dependents	Personal_loan	House_loan	Partner_workin
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freq	NaN	1244			NaN	2.457938	NaN	NaN	Nal
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# Key insight and analysis

### Profession and Income Insights

- Customers in business professions tend to have higher salaries compared to salaried professionals.
   For example, a businessperson earns around ₹99,300, while a salaried professional earns between ₹72,500 to ₹97,300.
- Recommendation: Premium models, such as highend SUVs, can be marketed toward customers in business professions, whereas affordable models can target salaried professionals.



### Key insight & analysis

### Impact of Loans and Financial Obligations

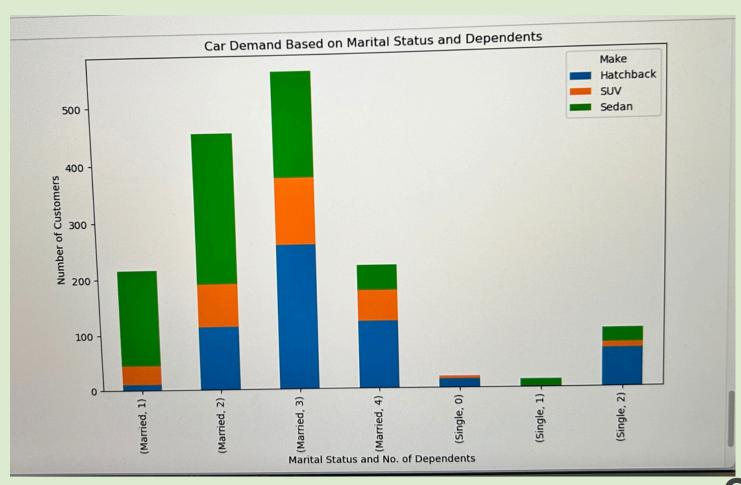
- Some customers have personal loans or house loans, which could limit their spending capacity. However, this should be weighed against household income.
- Recommendation: Offer attractive financing options or special loan packages for those with existing financial commitments, making it easier for them to purchase a car.

				Marital status	Education	No_of_Dependents	Personal_loan	House_loan	Partner_workin
	Age C	ender F	Profession I	Maritai_status			1581	1581	158
count 15	81.000000	1581	1581	1581	1581	1581.000000		2	
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top	NaN	Male	Salaried	Married	Post Graduate	NaN	Yes	No	Ye
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mean	31.922201	NaN	NaN			0.943483	NaN	NaN	Nat
std	8.425978	NaN	NaN	NaN	NaN				Nat
min	22.000000	NaN	NaN	NaN	NaN	0.000000	NaN	NaN	
25%	25.000000	NaN	NaN	NaN	NaN	2.000000	NaN	NaN	Nat
				NaN	NaN	2.000000	NaN	NaN	Nat
50%	29.000000					3.000000	NaN	NaN	Nat
75%	38.000000	NaN	NaN				N-N	NaN	Nat
max	54.000000	NaN	NaN	NaN	NaN	4.000000	NaN	Nan	1401

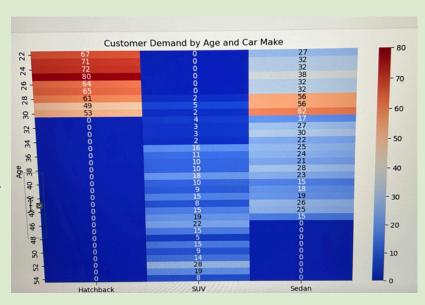
## Key insight & analysis

Marital Status and Number of Dependents

- A majority of customers are married, with two to four dependents. This indicates that many customers are likely looking for family-oriented vehicles.
- Recommendation: Emphasize family features in cars such as safety, space, and comfort in your marketing campaigns.
   Highlight benefits that appeal to families.



## Key insight& observation



### SUV Demand:

- The highest demand for SUVs is among customers aged 53 to 56, with peaks at 53 (66 customers) and 55 (62 customers).
- There is also notable demand for SUVs from younger customers, aged 35 to 40, though the intensity is slightly lower
- Recommendation: Focus marketing efforts for SUVs on customers aged 50 and above by emphasizing family-friendly features, durability, and safety. Additionally, campaigns could target mid-career professionals in their 30s who may be looking for larger, versatile vehicles.

### Sedan Demand:

- Sedans show consistent demand across various age groups, with the highest concentration among customers aged 55 (66 customers) and 53 (56 customers).
- Customers aged 60 and above show a marked preference for sedans, with peaks at 72 (80 customers).
- Recommendation: For sedans, target marketing campaigns toward older professionals and retirees who prefer comfort and luxury. Highlight the sedan's reliability, spacious interiors, and fuel efficiency in this segment.

### Hatchback Demand:

- Hatchbacks have little to no demand across most age groups except for some spikes at younger ages, particularly between 22 to 35 years. The demand is significantly lower compared to SUVs and sedans.
- Recommendation: Focus hatchback marketing efforts on younger, urban professionals or first-time car buyers.
   Emphasize affordability, compact size, and fuel efficiency as key selling points.

### Age-Related Preferences

- Customers aged 53 to 56 are a crucial age group, with significant demand across both SUVs and sedans. This indicates that these customers are likely at a stable financial position, possibly with families, making them interested in vehicles that offer both comfort and utility.
- Younger customers in their 30s and 40s tend to prefer SUVs, suggesting a potential focus on middle-aged professionals looking for versatile, stylish vehicles that accommodate family needs.

### 3. Car Model Insights

- SUVs: The dominant car model among middle-aged to older customers. These buyers may prioritize space, comfort, and the ability to handle longer drives or rougher terrains.
- Sedans: Preferred by older customers (60+) who may seek comfort, status, and ease of driving.
- Hatchbacks: Favored by younger, possibly budget-conscious individuals or those living in urban settings where smaller cars are more practical.

### Conclusion

This analysis provides an overview of customer demographics and financial conditions, helping Austo Motor Company make informed decisions to target their marketing campaigns more effectively. By segmenting the customer base and focusing on attributes like age, profession, financial commitments, and income, the company can design personalized marketing strategies, increasing overall customer engagement and sales

### **Next Steps**

- Develop targeted marketing campaigns based on customer segments identified.
- 2. Utilize digital channels and targeted ads to reach specific demographics, such as family-oriented models for middle-aged customers and luxury models for high-income earners.
- 3. Introduce financing options tailored to customers with loans or financial dependencies to improve conversion rates.
- 4. Regularly review customer data to adapt marketing strategies to changing customer preferences and market conditions.

