
Used Cars Price Prediction

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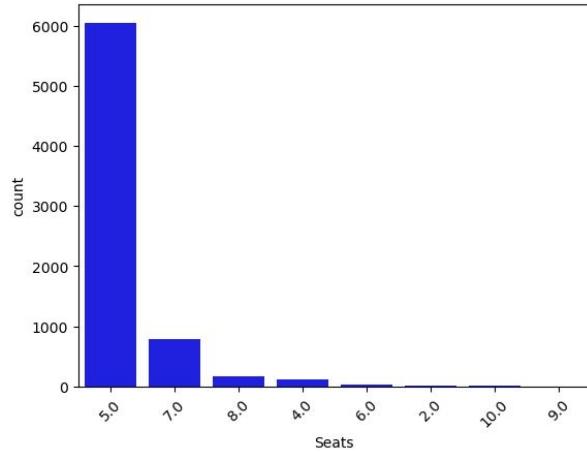
Problem Summary

- Cars4U aims to fill the huge demand in the used car market
- The used car market is dynamic and pricing can be highly variable
- Accurate price prediction helps dealerships, buyers, and sellers set fair and profitable market prices

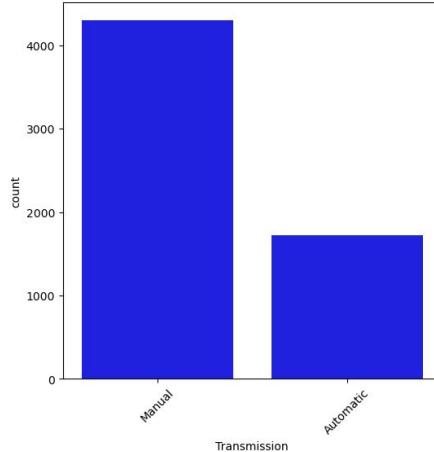
Objective

- Develop a machine learning model to predict the price of used cars
- Help Cars4U and consumers make informed pricing decisions

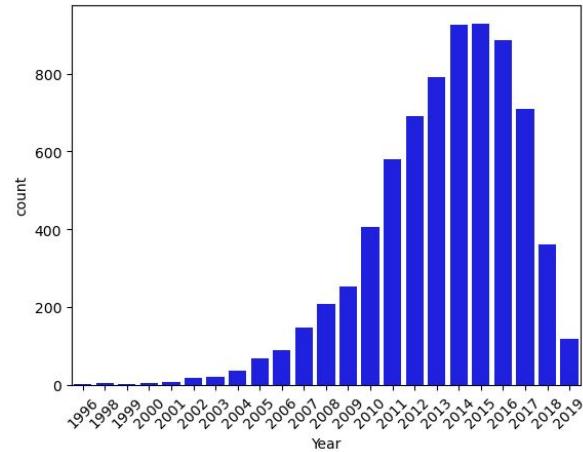
Initial Key Findings



84% of cars have 5 seats

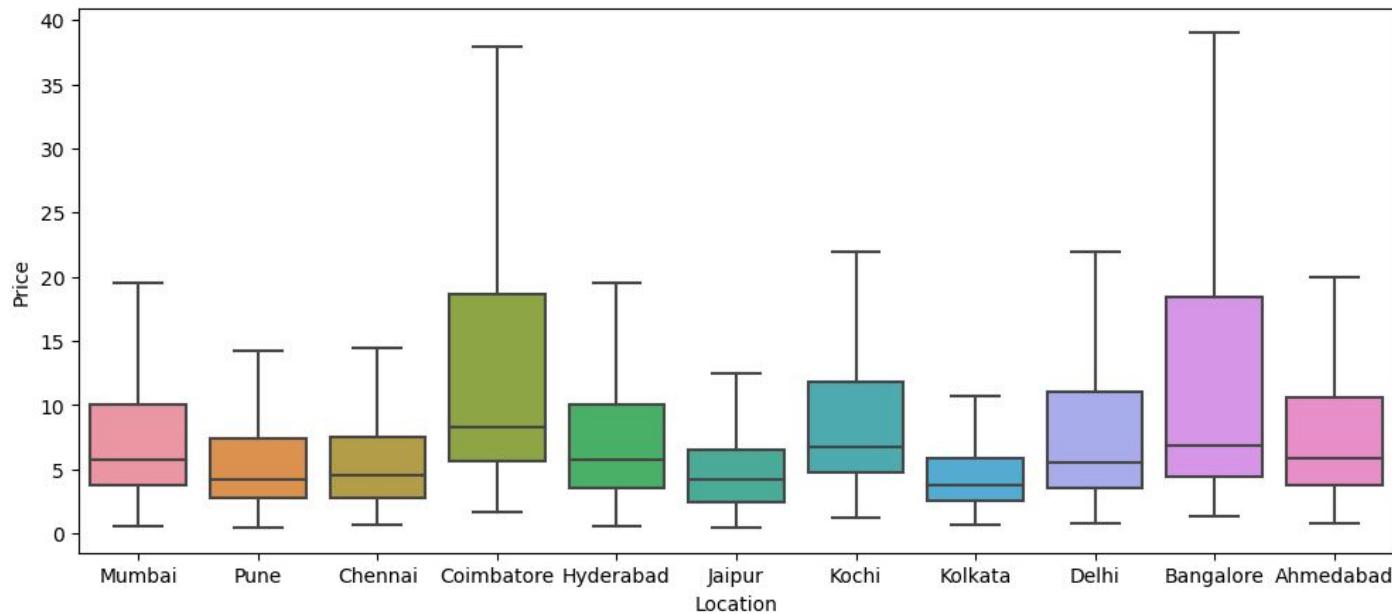


Cars with manual transmission make up 72% of the data



Cars from 2011-2017 make up 70% of the data

Initial Key Findings



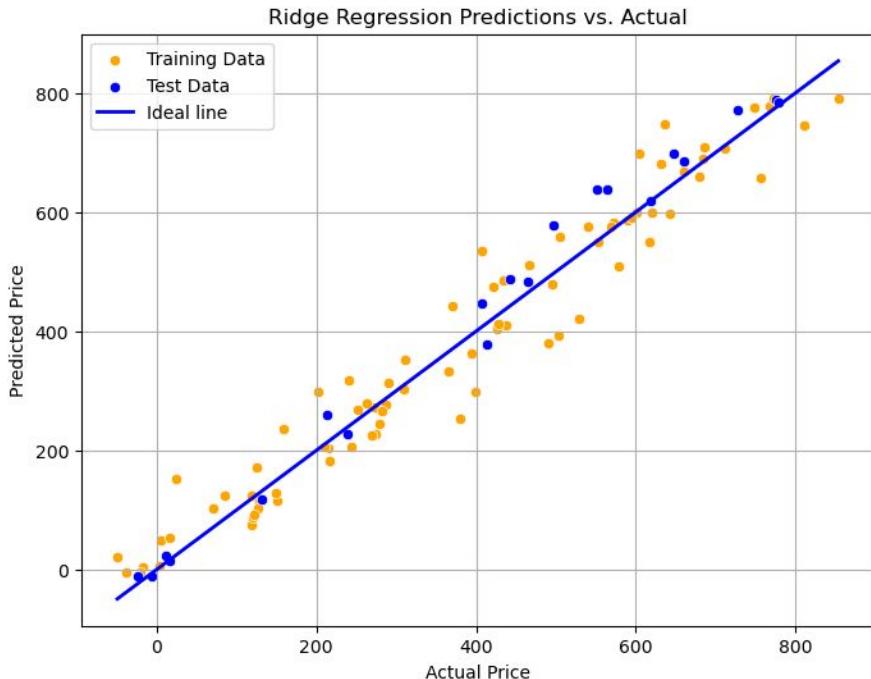
Coimbatore and Bangalore
have the highest pricing

Proposed Model Solution

Ridge Regression Model

- Able to handle multicollinearity while improving model generalization
- Reduces overfitting, making it more stable compared to standard linear regression
- Improves Model stability

Final Model Solution



- Ridge Regression performed the best overall with the lowest RMSE and least negative R^2 .
- The visualization on the left indicates that the model is capturing used car prices well

Proposed Business Solution

- Invest in creating an app or online form using the final prediction model to help sellers and dealers set prices on used cars
- Gather more data with a focus on cars that have 5 seats, Manual transmission, are from 2011-2017, and from more expensive locations like Coimbatore and Bangalore
 - Add more variables, like car color, accident history, condition
 - Via Web scraping or Customer/Dealership intake forms