Optimizing Used Car Listing Quotations

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01

INTRODUCTION

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Motivation

To overhaul used car listing/quotation process, seeking maximum efficiency and accuracy

Objectives

Leverage existing used car listing data to build an informed predictive model

Goals

Implement our predictive tool into production to begin stream-lining the quotation process

02

METHODOLOGY

FRAMEWORK

APPLY VARIETY OF DIFFERENT REGRESSION MODELS TO VIABLE LISTINGS TO ‘TRAIN’ OUR TOOL

LISTINGS

EACH LISTING REPRESENTS ONE CAR AND ITS FEATURES AND SPECIFICATIONS

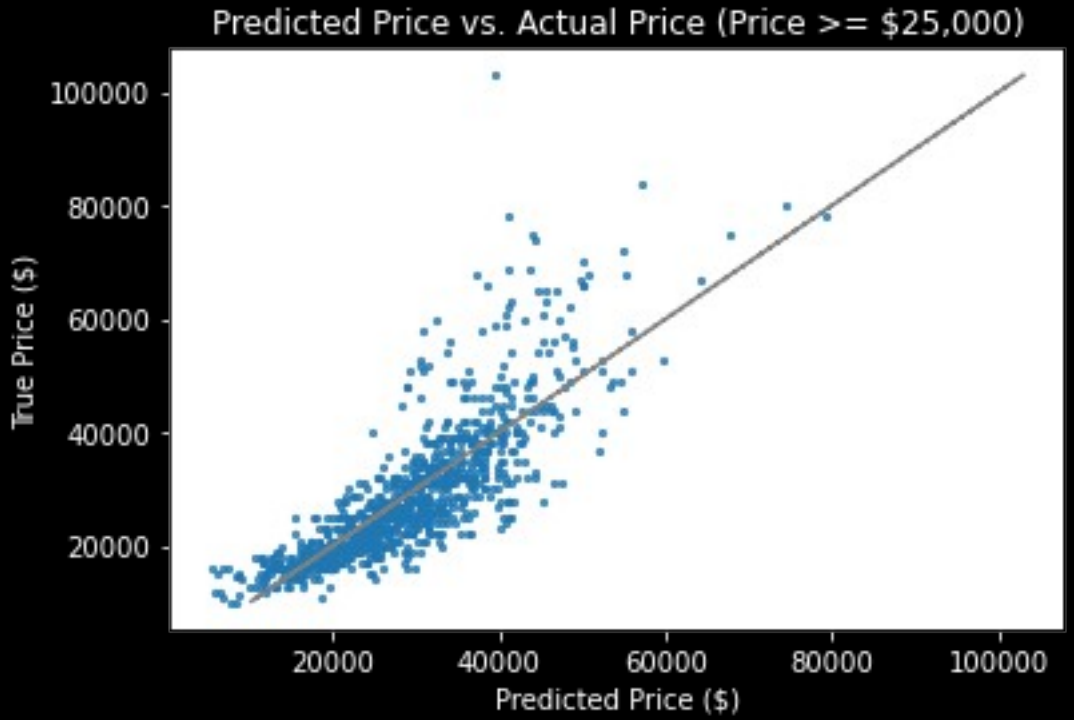
THE DATA

- Web-scraped from carmax.com
- Encompasses a wide range of models, makes, and classes
- 1,293 car listings

02

RESULTS

PRICE RANGE AS A FACTOR

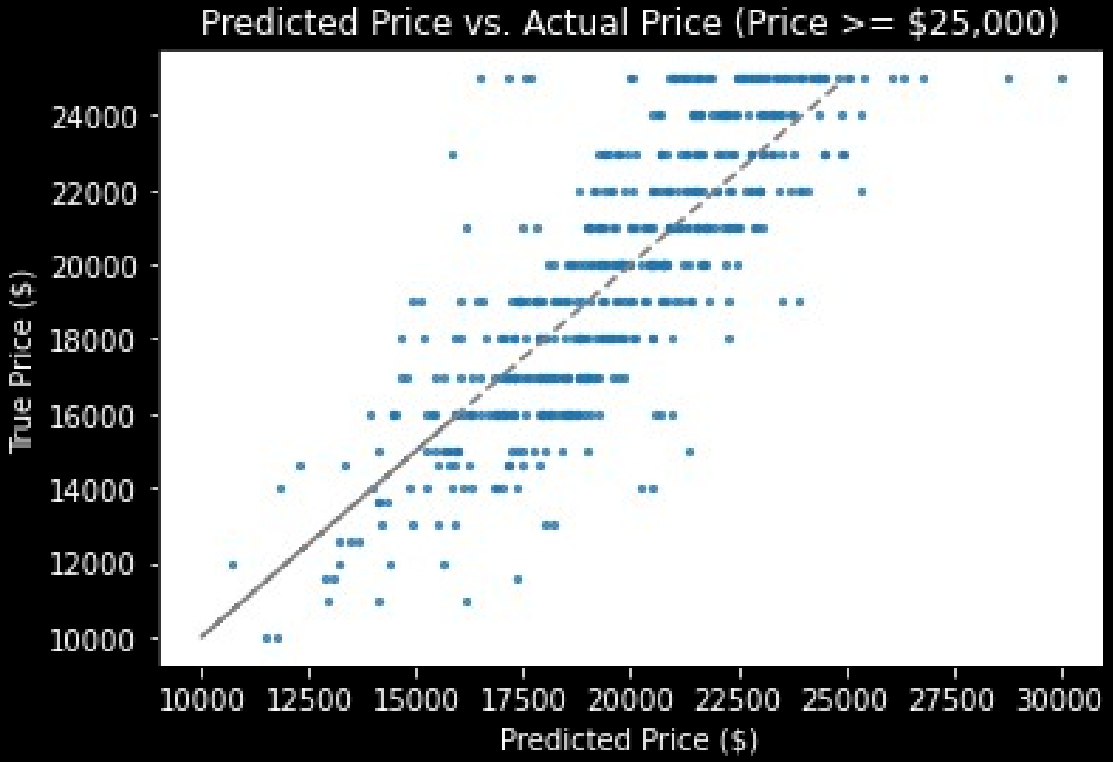


- Conical shape = BAD

What is an acceptable price range?

After filtering for strongly price-correlated features, we determined the model is most effective for price <=$25,000

A REWORKED MODEL



16

Features

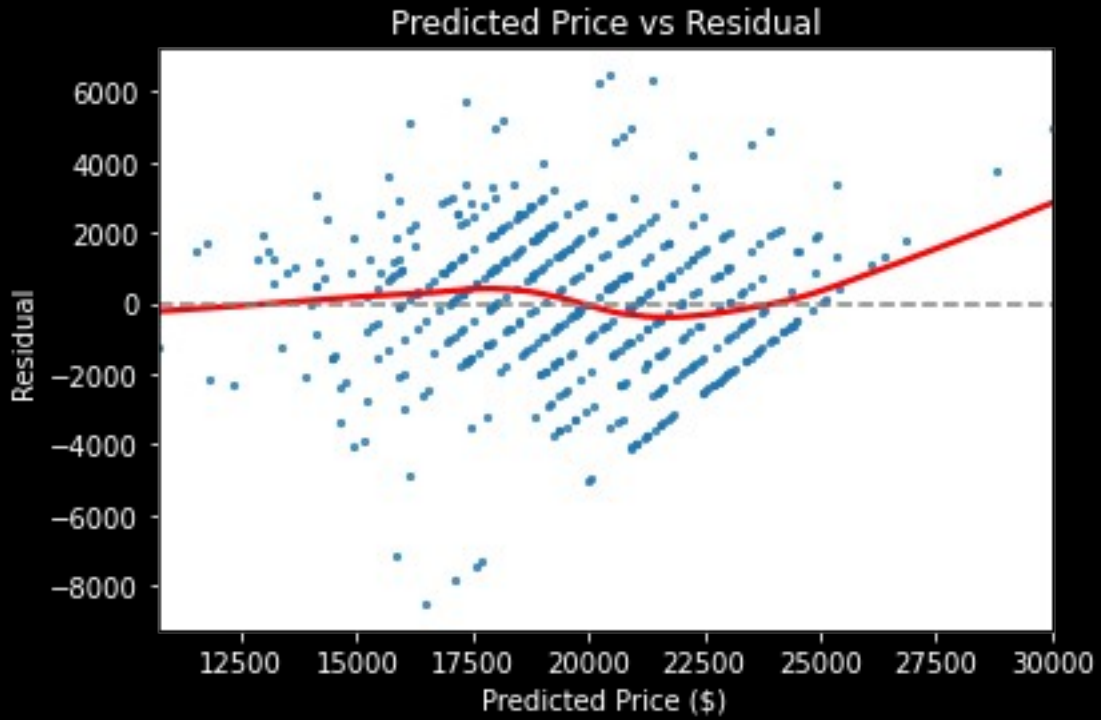
$1,540.54

Mean Absolute Error

0.62

R2

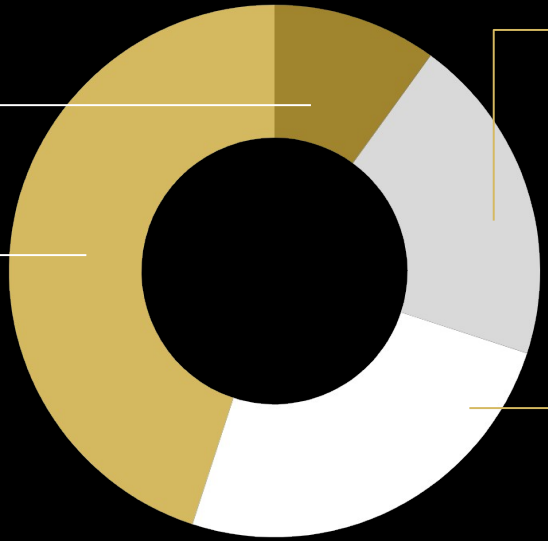
A REWORKED MODEL



KEY FEATURES

Mileage

Year

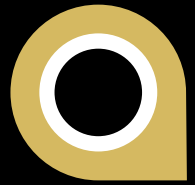


Horsepower

MPG

LOOKING FORWARD

- Investigate modeling techniques that can account for behavior above $25k
- Investigate our features, potentially bring in more features




Thank
You

THANKS!

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