

**Deloitte.**

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## Summary


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- Using Data, we can predict the price of used cars in the currently declining car market. With used car Giants such as Carvana and others on the brink of bankruptcy we can use ML to capitalize on their downfall.

# Agenda

1  Business Understanding

2  Data

3  Data evaluation

4  Prediction

5  Conclusion





# Business Understanding

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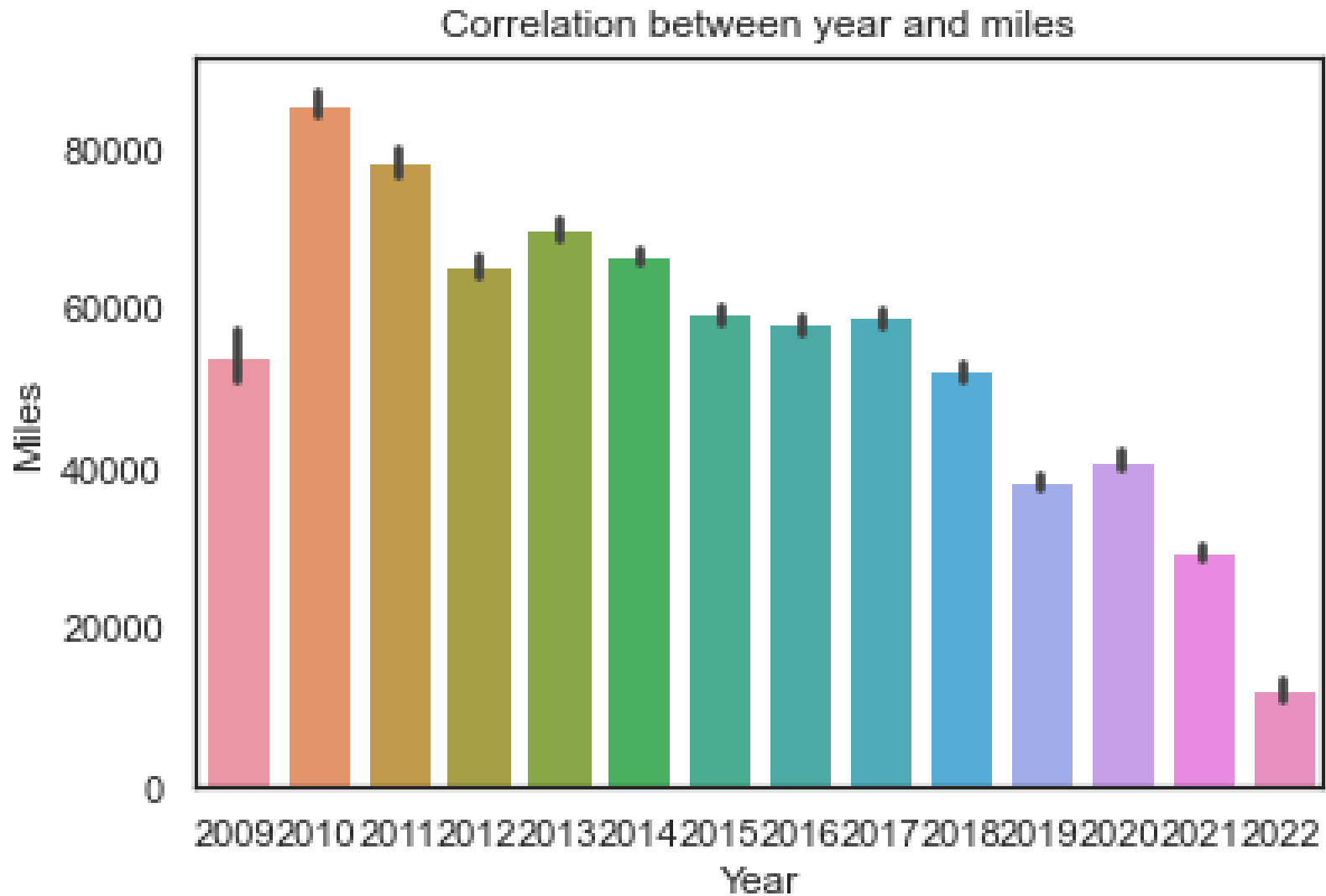
- Understanding the market
- Utilizing Carvana's Inventory
- Used ML to predict car prices

# Data Understanding

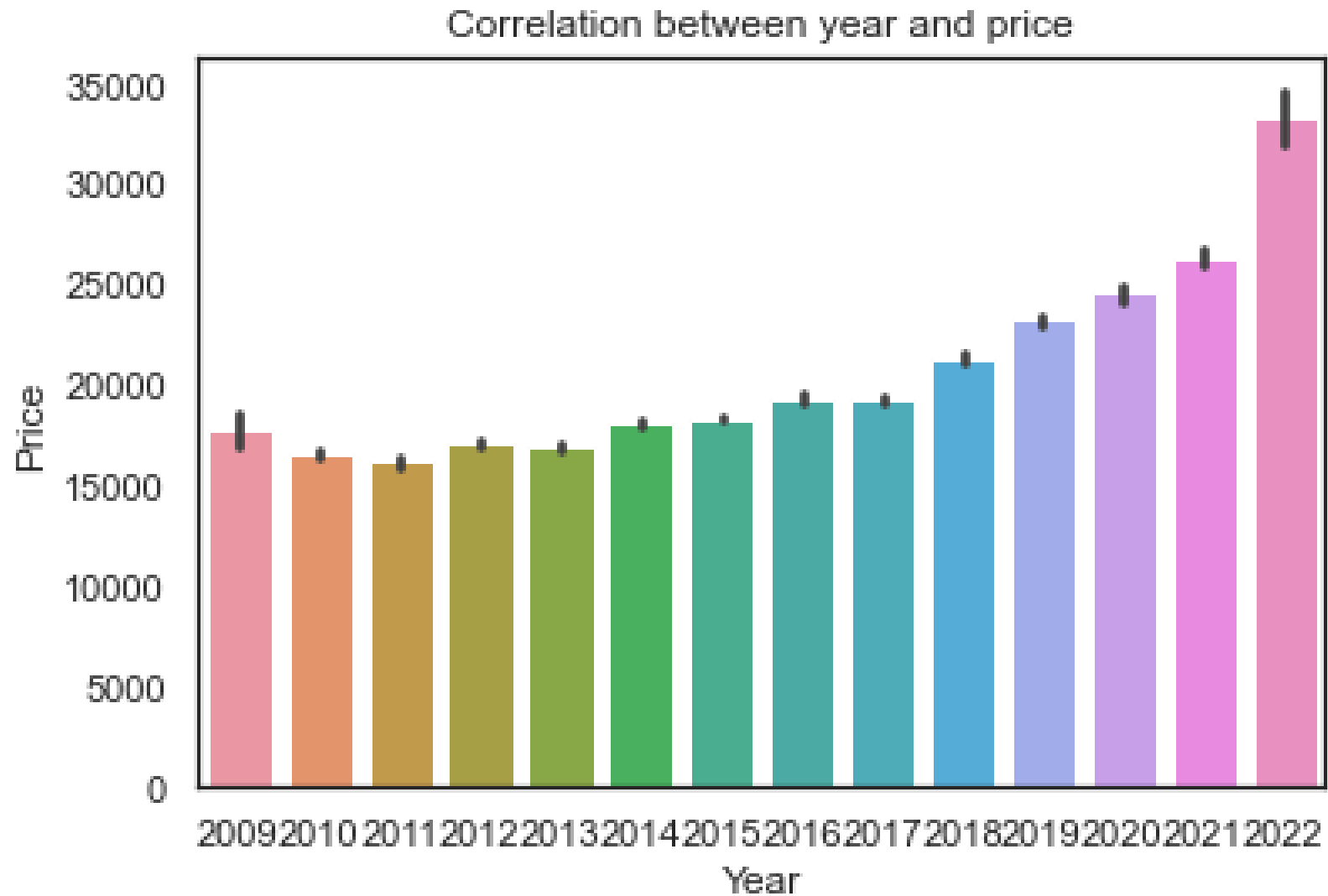
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- Carvana Used Car Inventory
  - Contains over 20 thousand used cars
  - Ranging from 1995 to 2022
- Important Numbers
  - The average price of a car in their inventory is 20k
  - The average amount of miles on their cars are 54k
- Outliers
  - There are some older antique cars as well some new high-end cars
  - We will not be focusing on those

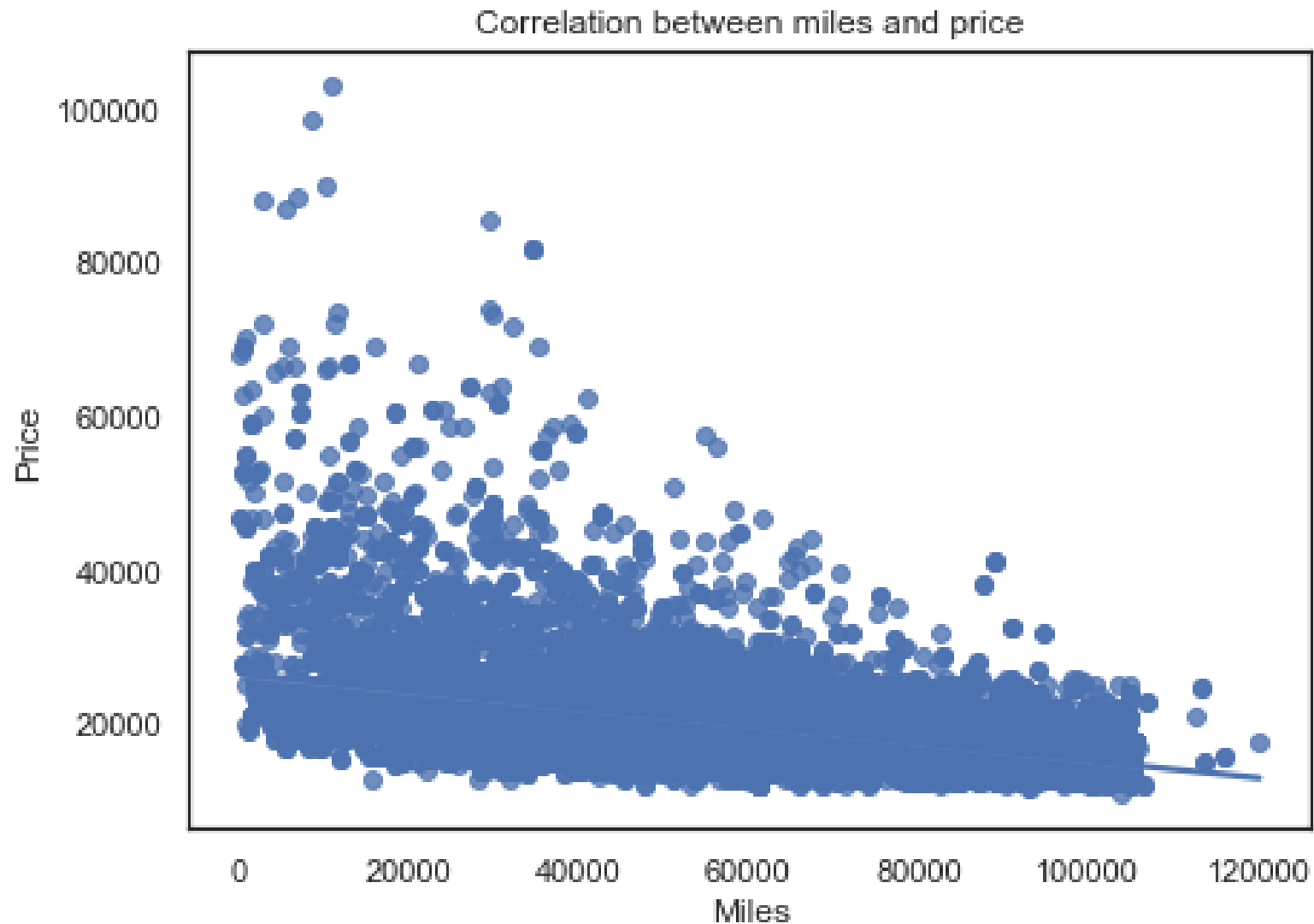
# Understanding the market



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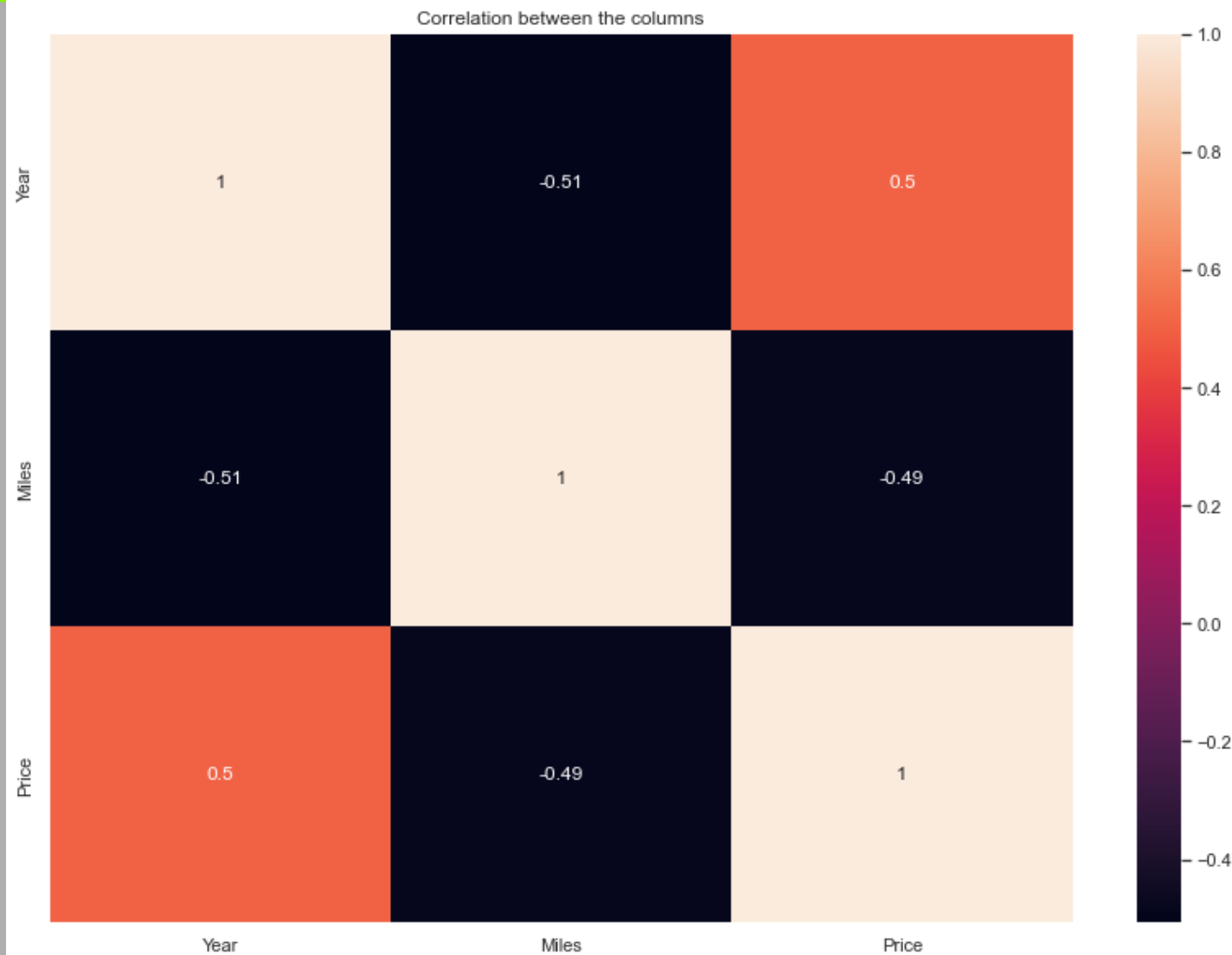


# Understanding the market

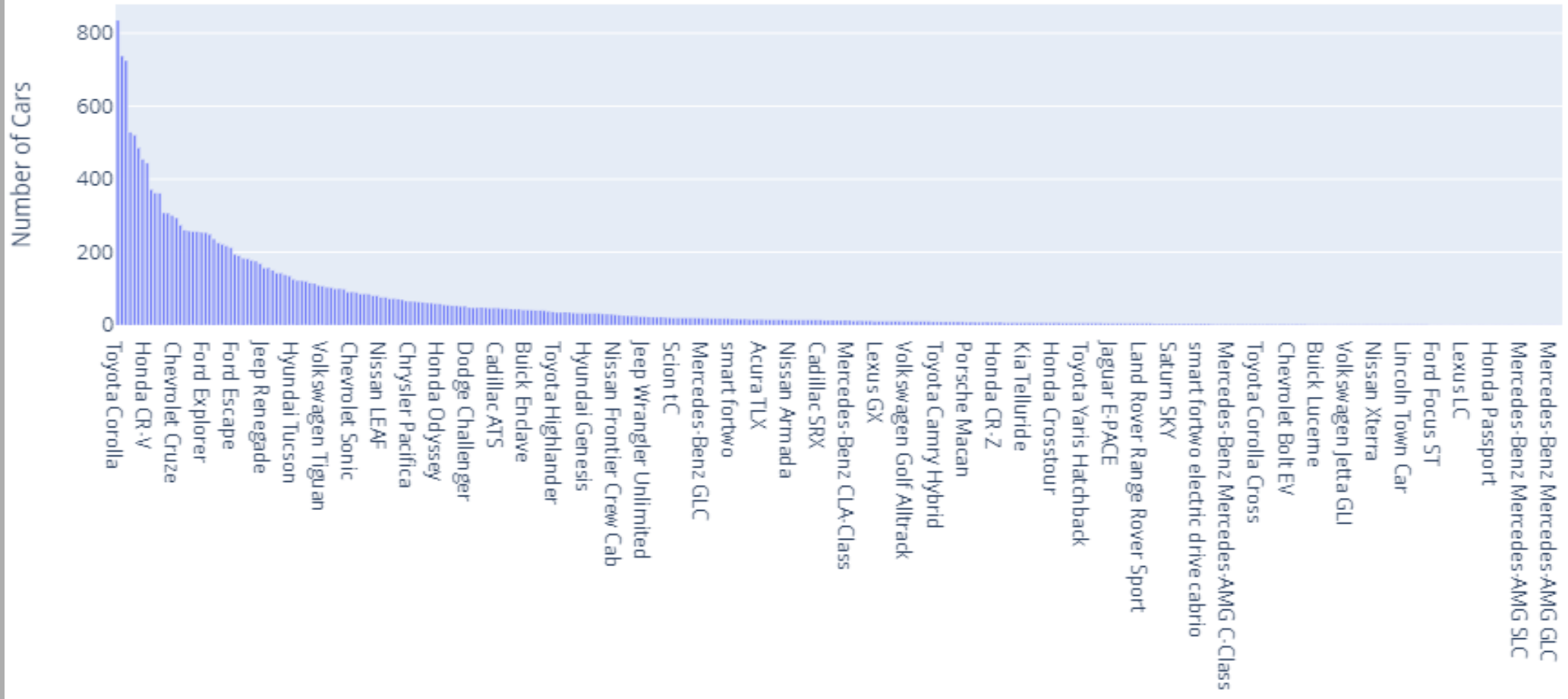




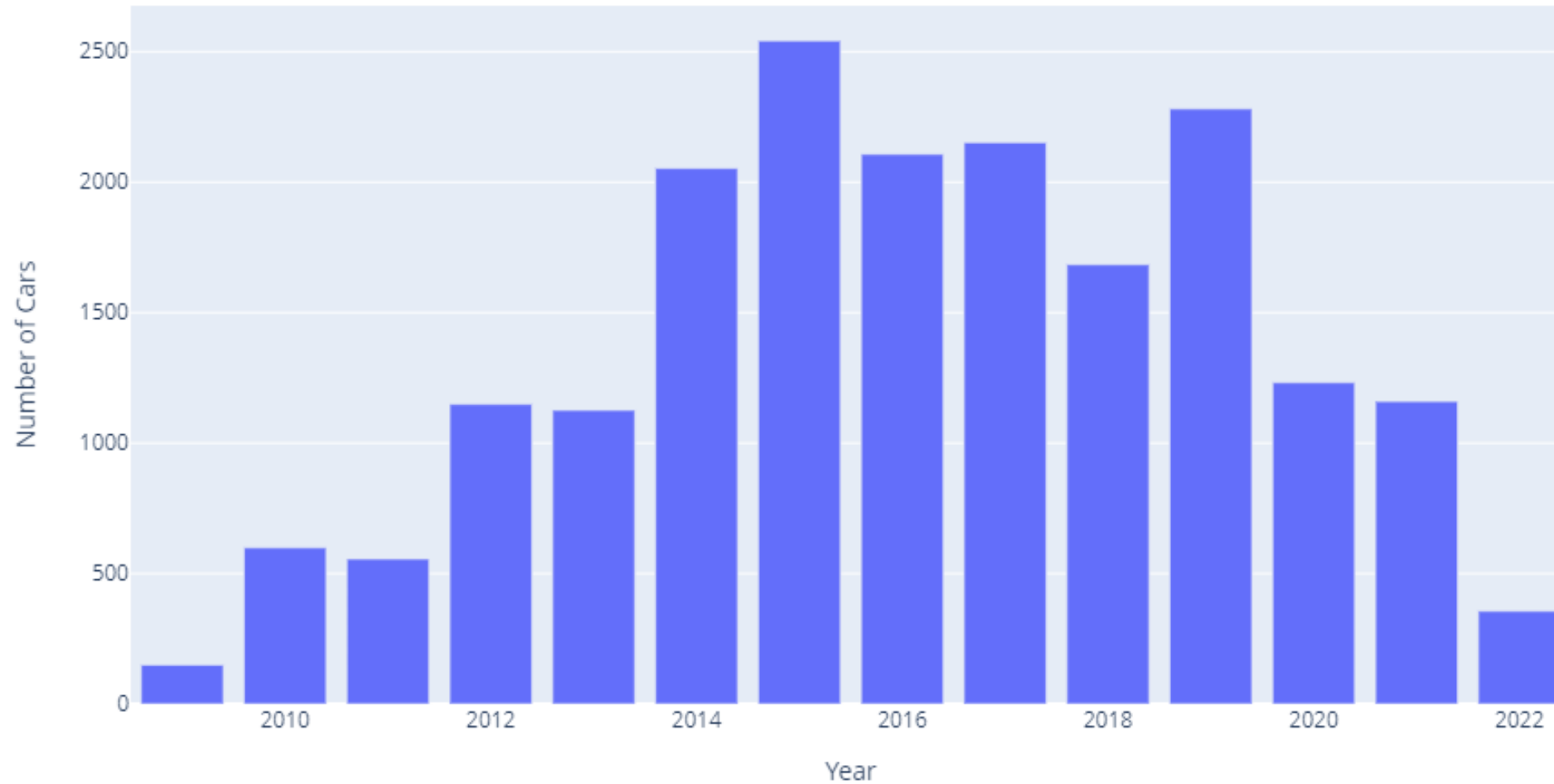
# Understanding the market



# Carvana Used Car Inventory Visual



# Carvana Used Car Inventory Visual pt. 2



# Prediction

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- The average price of a car in their inventory is 20k
- We trained 3 different models
- Decision Tree Regressor had the lowest amount error being able to predict within 1600\$
- The model predicted that the company show pay est. 18500\$ for 2018 used car

Linear Regression	Decision Tree	Xgboost
3178	1662	2454

# Conclusion

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- In the future We would like to look at dataset with more values/categories to get a better understanding of the market

