

Let's Start

# GuessPrice

Presented by :

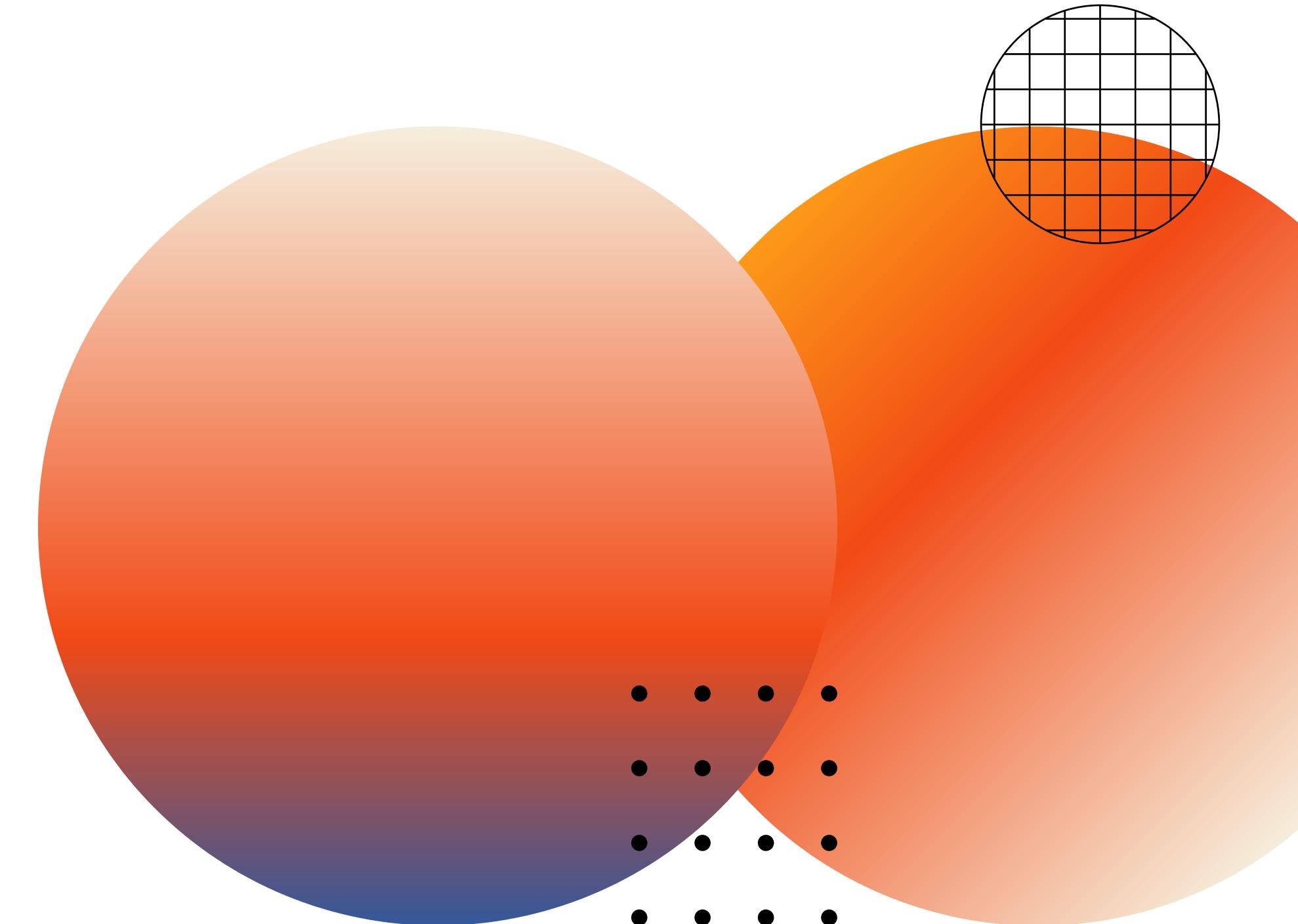
Darguechi hela

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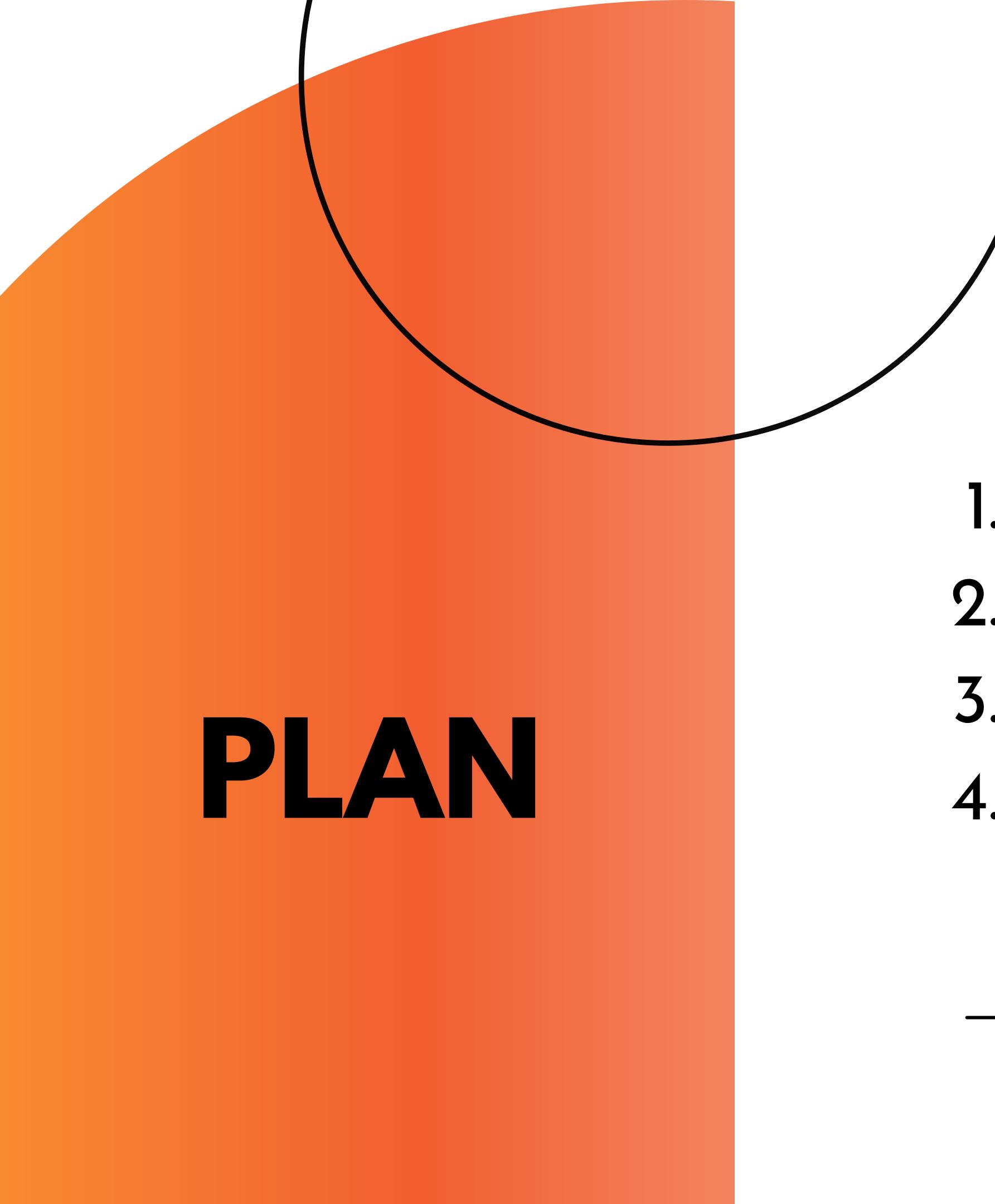
Ennaifer Khalil

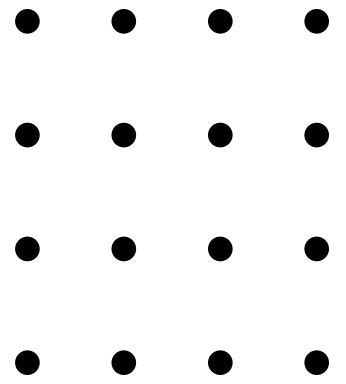
Amorri Mohamed

Ben Salem Malak



# PLAN

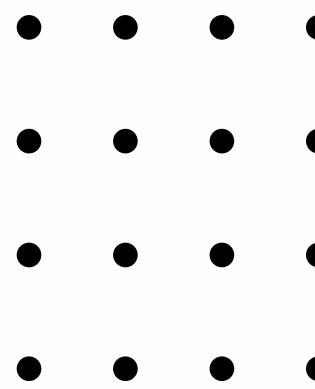
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1. Project Description
  2. Problems and solution
  3. Scientific poster
  4. Conclusion and perspectives
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# Project Description

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# Problematic

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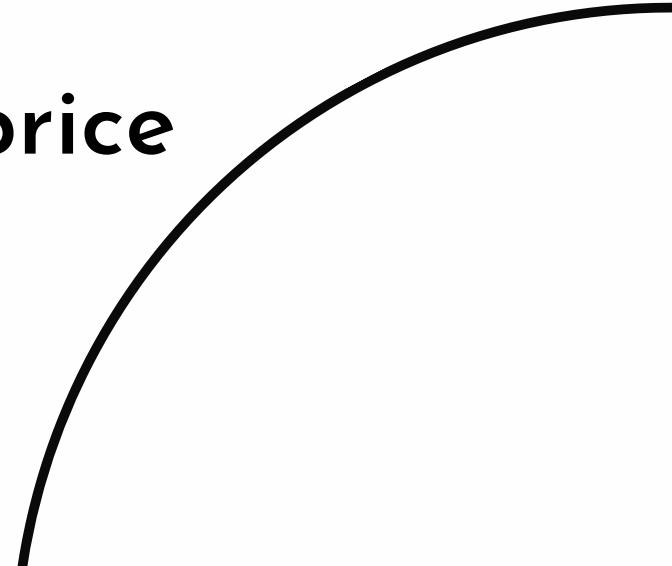
Best season of prices



Real car condition



Real price



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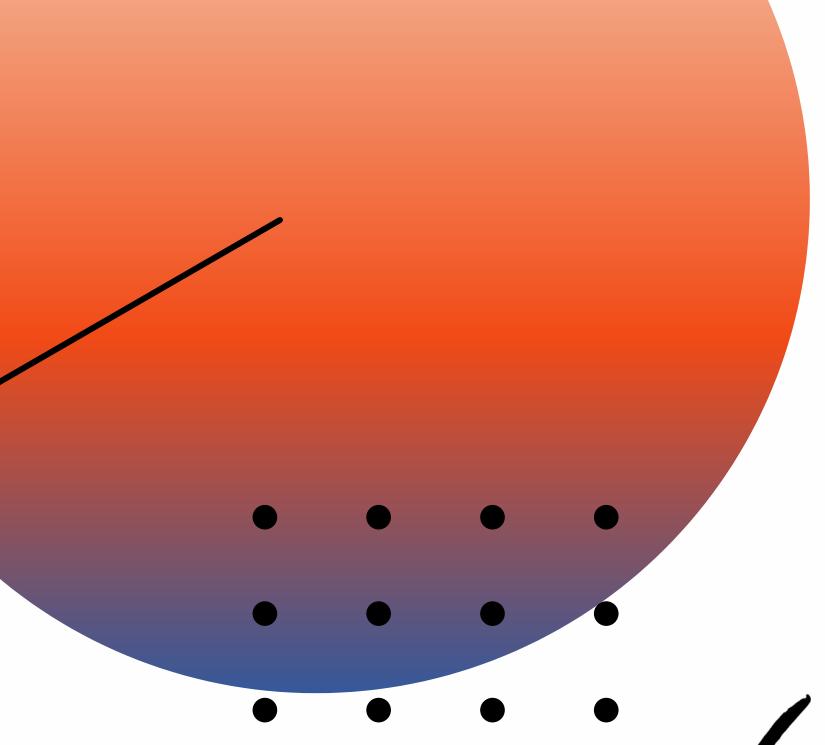
# Our solution

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## Used Car Price Prediction System



- Price Prediction
- Car Condition Prediction
- Prediction of seasonal price increases and decreases



# Data Preparation

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✓ *Data imputation:*

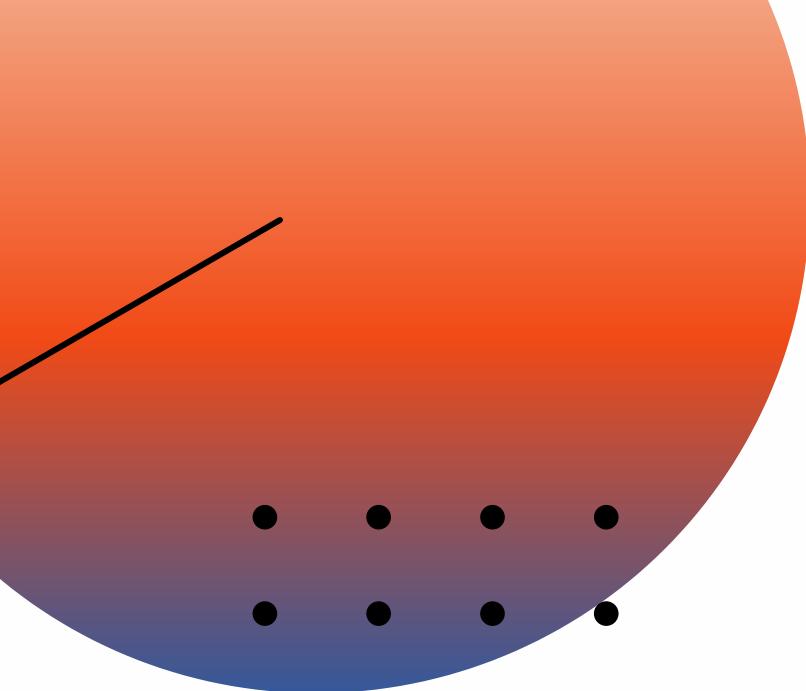
- Replace NAN values with most frequent , median and delation.

✓ *Data cleaning:*

- Delete duplicates and specific characters.

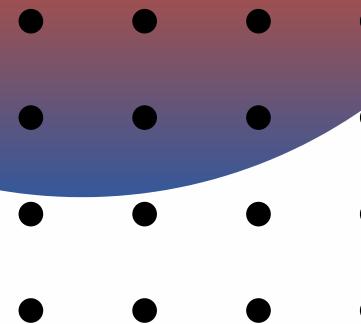
✓ *Data processing:*

- Encode ordinal characteristic with the OrdinalEncoder class and encode nominal characteristics.

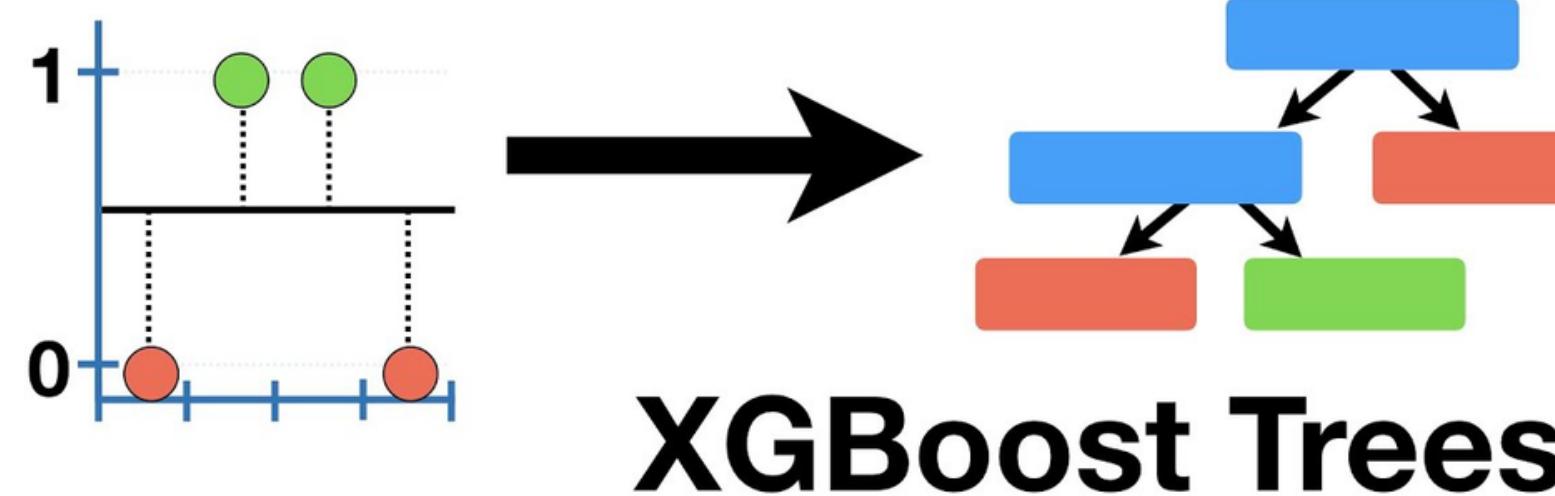


# Data modeling and Evaluation

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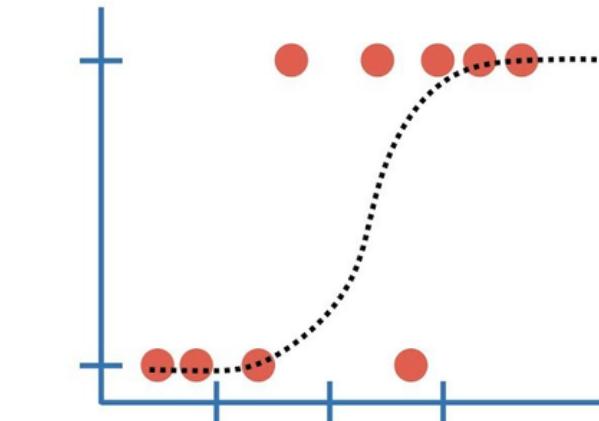
Regression model for car price prediction



R-squared: 75%

Classification model for car condition prediction

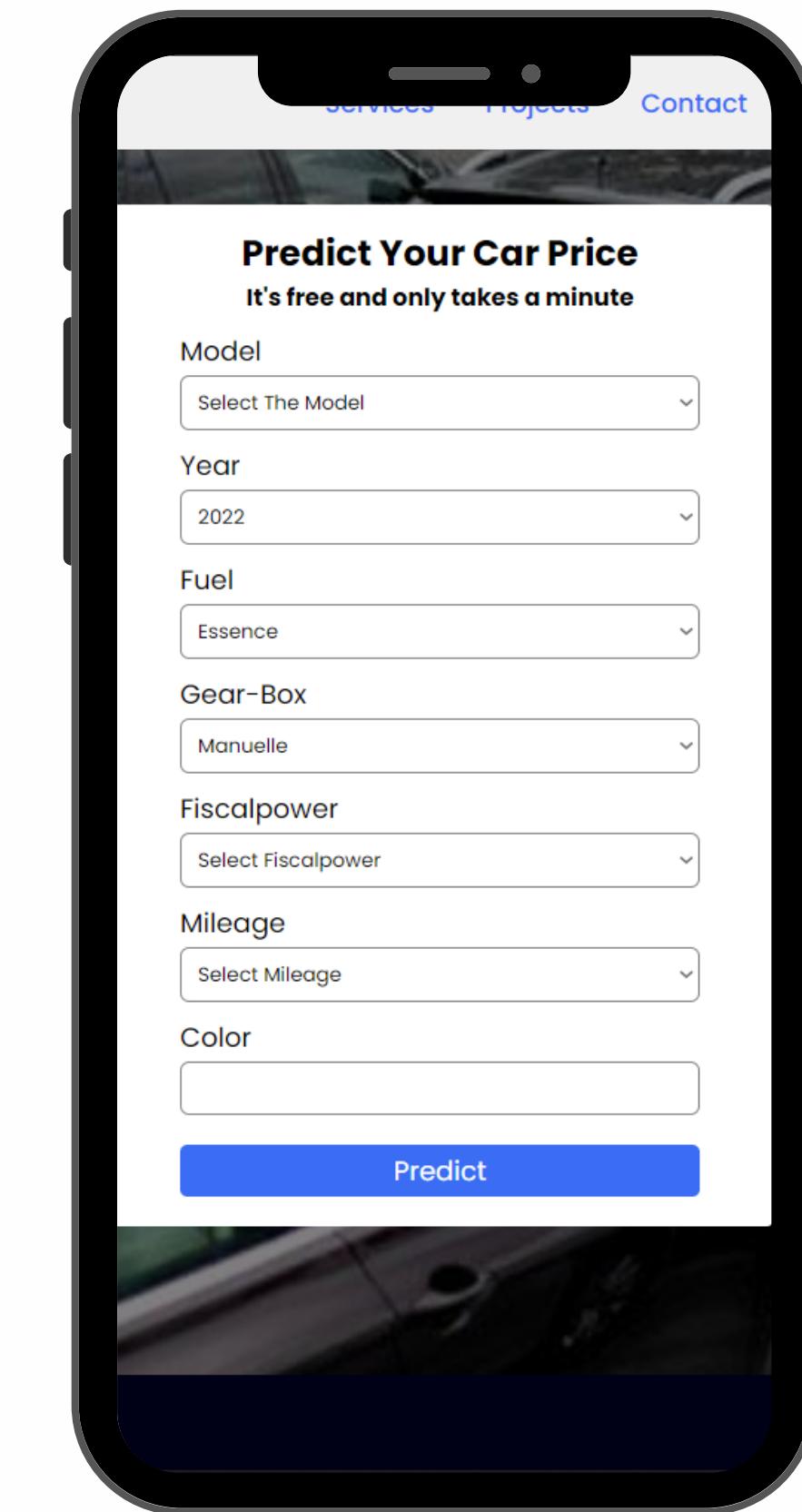
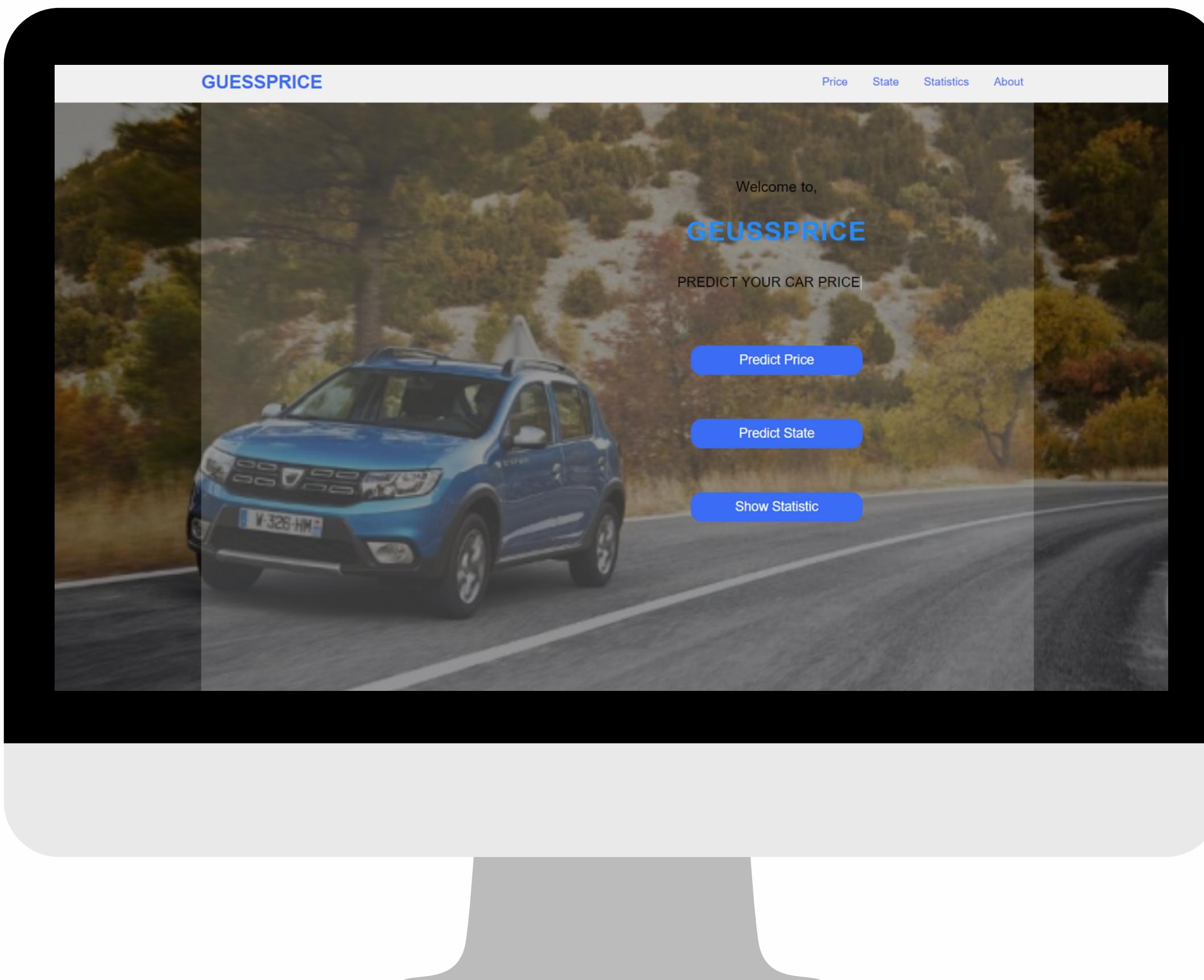
Logistic Regression...



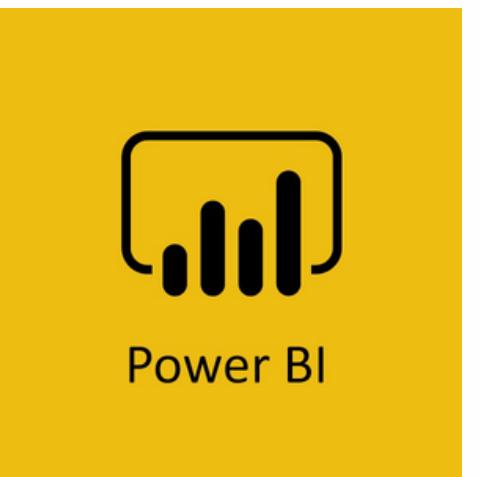
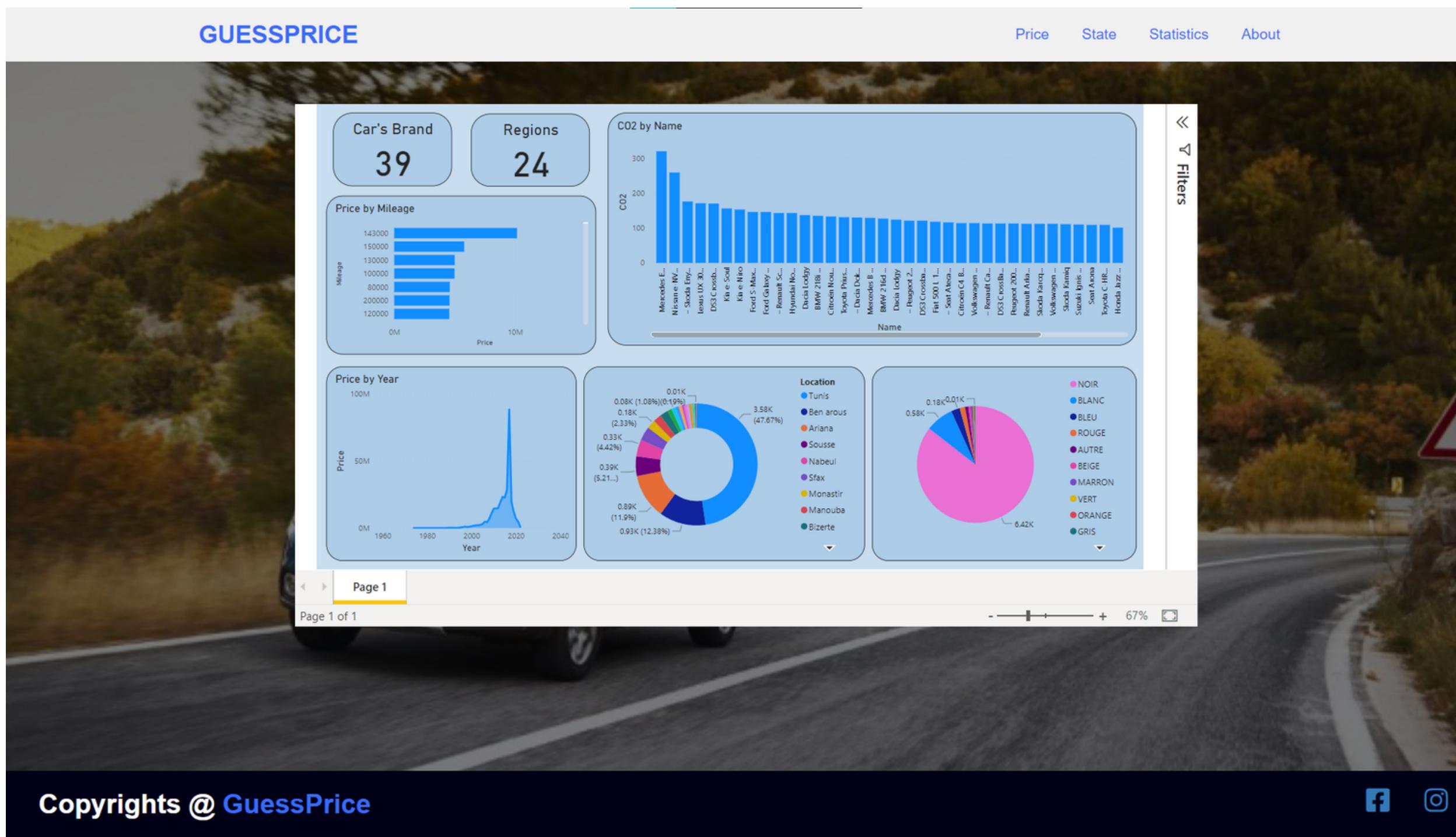
Accuracy: 86%

# Data vizualisation

django



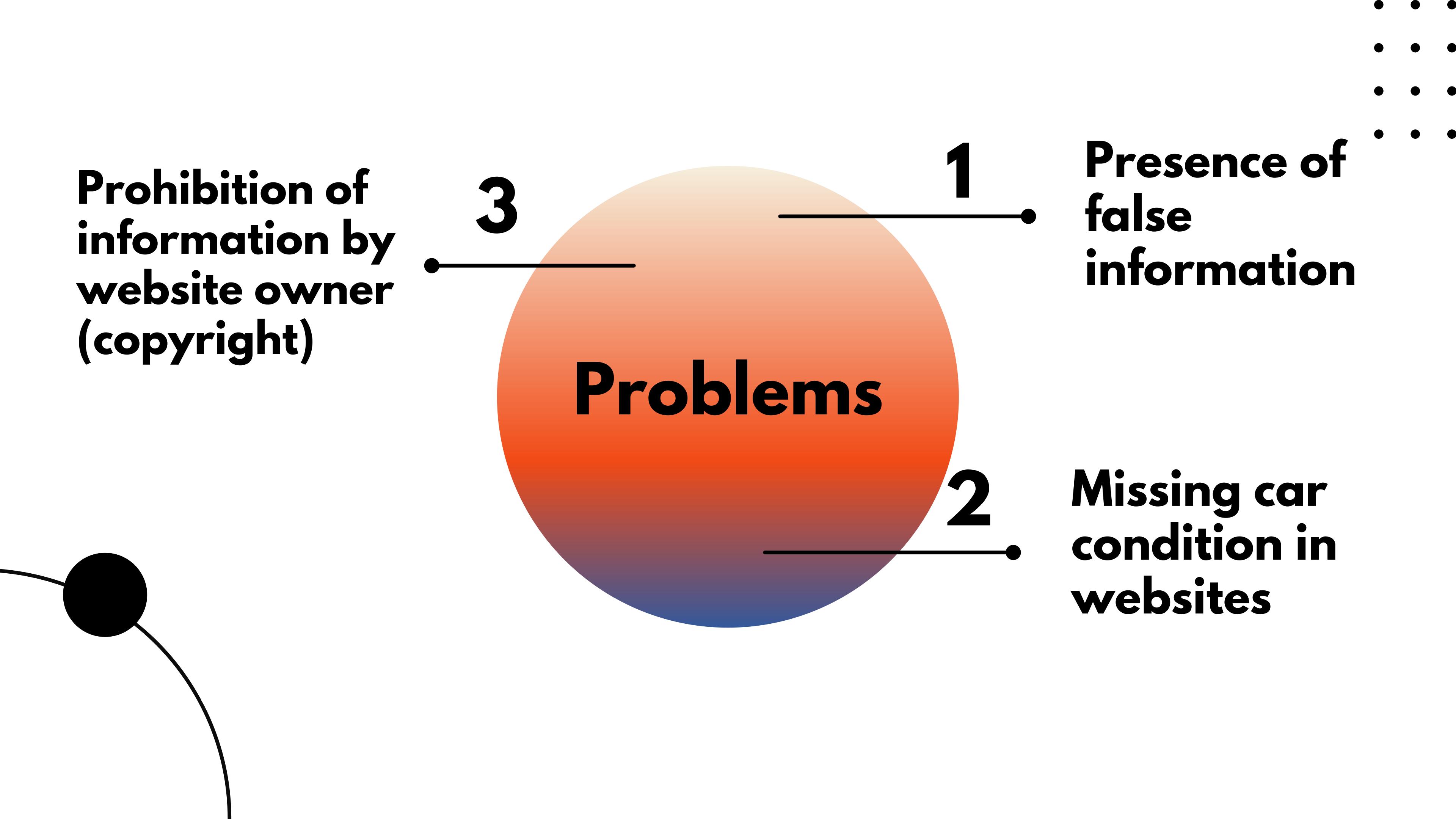
# Statistics



# **Problems and solution**

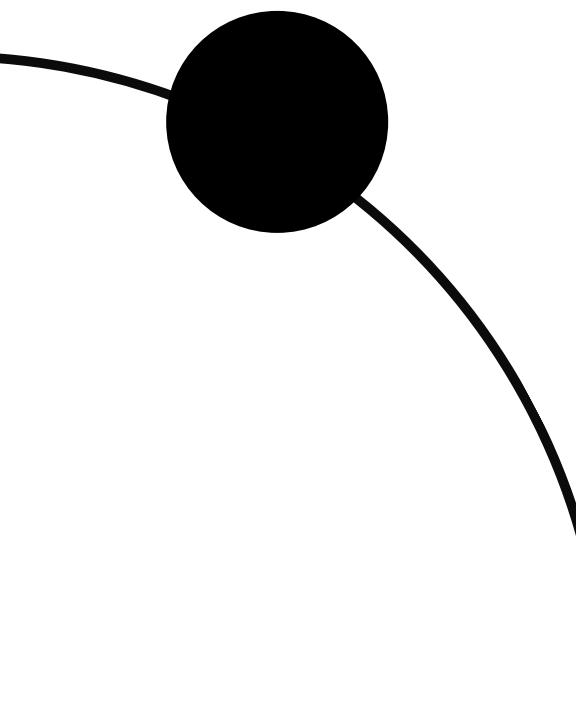
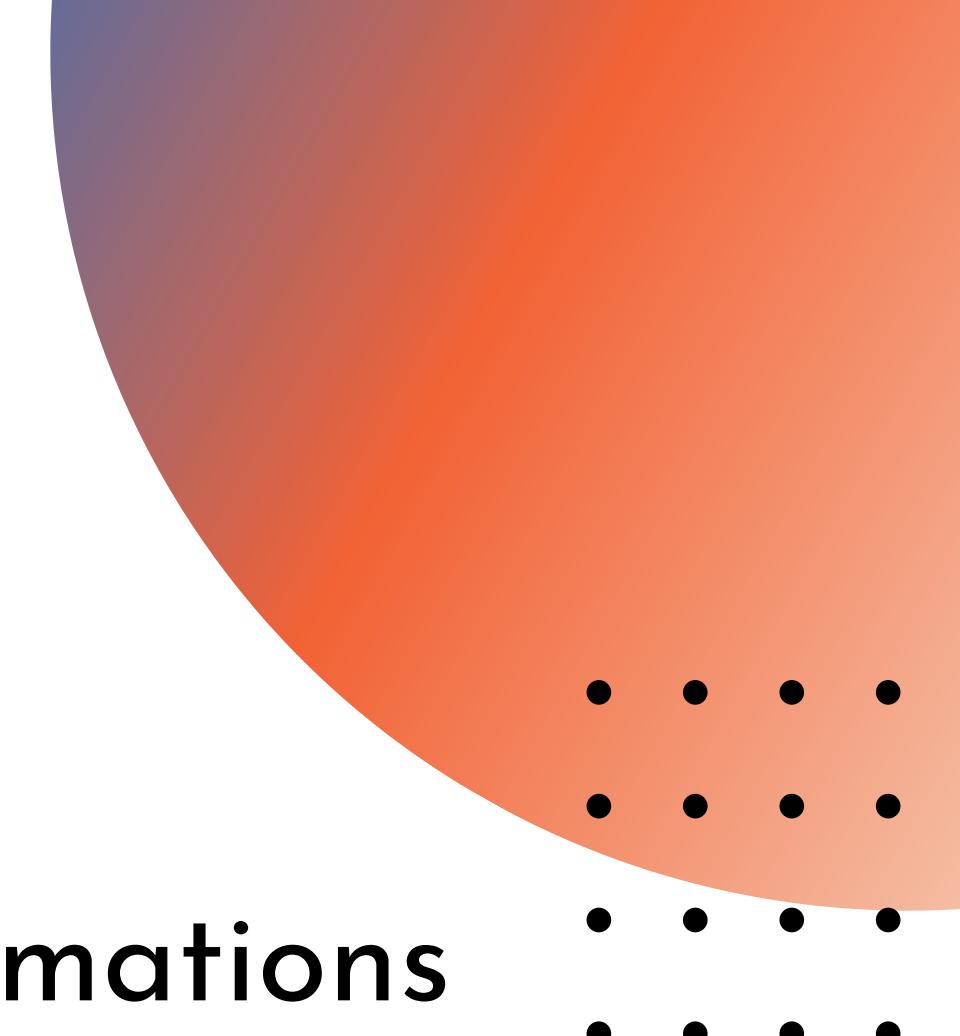
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# Solutions

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- 1** Delete or replace with the closest predicted values to organize informations
  - 2** Scrapping Marrocain website to get car condition
  - 3** Copyright limited our resources, but we were able to have a large database containing all the necessary information
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# Scientific Poster

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# USED CAR PRICE PREDICTION SYSTEM

## GUESSPRICE

With the rapid expansion of machine learning, this problem can also be solved by minimizing human effort and time.



### INTRODUCTION

Sometimes selling your used car becomes crucial because we are not able to identify its fair price accurately. The depreciation of a car depends on a variety of factors, so the car owner must be aware of the value of his vehicle.

### OBJECTIVE

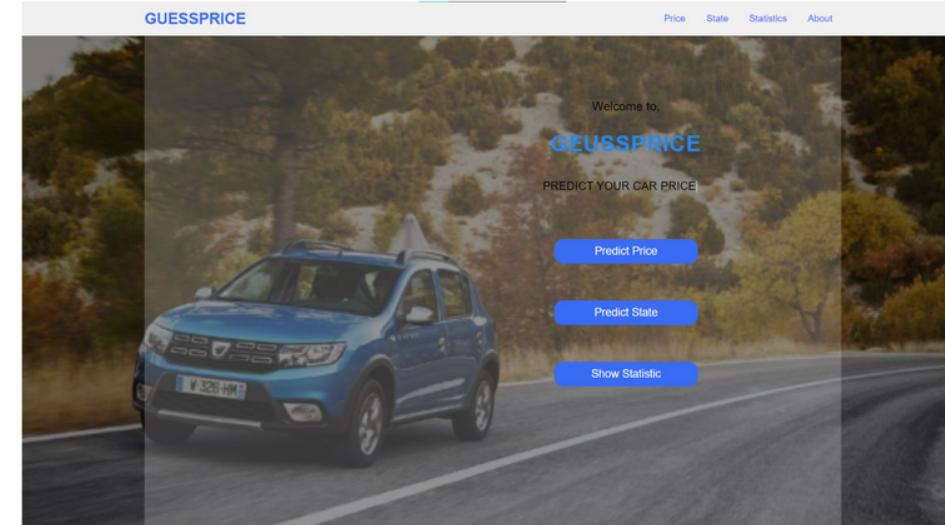
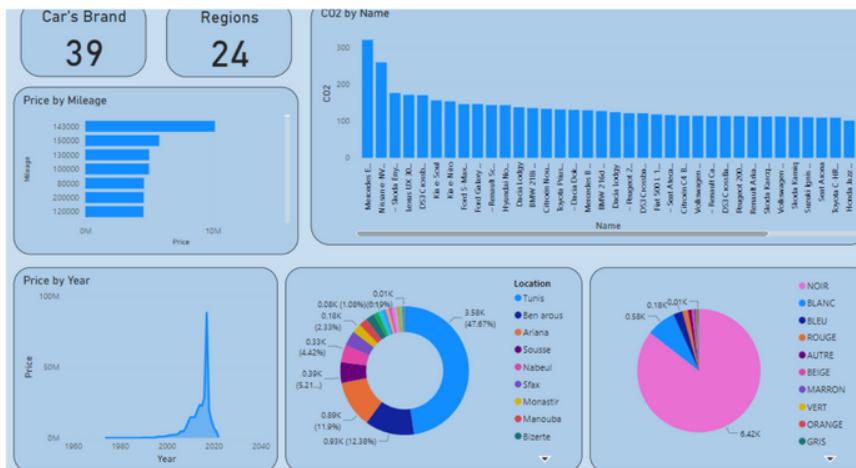
A car prediction system that will provide you with the approximate **selling price** of your desired car, **car condition** and the **season of price increase and decrease**.

### BUSINESS & DATA COMPREHENSION

**Business objectives:** Price car prediction, Car condition prediction and price car season prediction.

**DataScience objectives:** regression models (XGboost, Adaboost, DecisionTree, Linear regression, ANN) to predict car price and classification models (Random Forest, Naive Bayes) to predict car conditon.

### DATA VISUALIZATION



### DATA PREPARATION

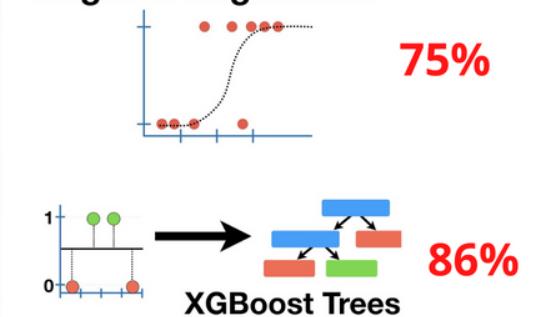
**Data cleaning:** delete duplicates and specific characters.

**Data imputation:** replace NAN values with most frequent, median and deletion.

**Data processing:** encode ordinal characteristic with the OrdinalEncoder class and encode nominal characteristics.

### DATA MODELING AND EVALUATION

#### Logistic Regression



### CONCLUSION AND PERSPECTIVES

Our project will lead us in the future to predict the prices of cars in the second hand market all over the world, we also intend to predict the prices of the spare parts or the price of the repair according to the most answered breakdowns

# **Conclusion and perspective**

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End

# Thank you

Do you have any questions?

