SPRL
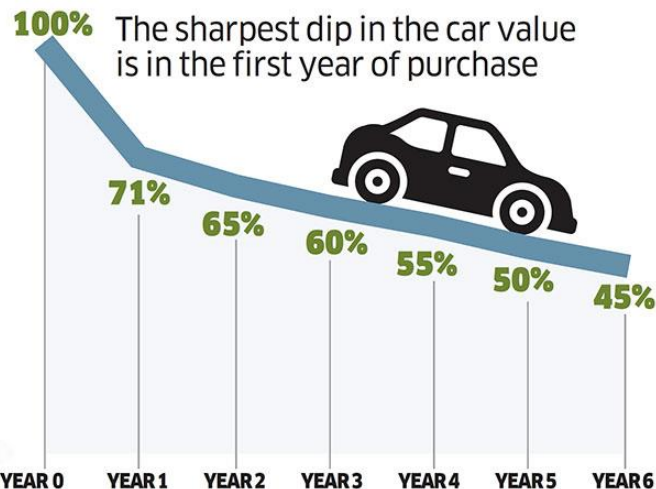
Background

- 44% respondens in India prefer to buy car online
- New regulation tax rate from 28% to 12-18%
- Indian screen time rises 2 hours/day since June 2020

Ref : https://auto.economictimes.indiatimes.com/news/passenger-vehicle/cars/90-of-car-purchases-in-india-are-digitally-driven/75075407
https://timesofindia.indiatimes.com/business/india-business/indians-screen-time-rises-by-2-hours-daily/articleshow/76415673.cms
https://www.cars24.com/blog/used-car-market-india-untold-story/
https://www.mordorintelligence.com/industry-reports/india-used-car-market

HOW DOES THE CAR VALUE DEPRECIATE OVER YEARS

The sharpest dip in the car value is in the first year of purchase

100%
71%
65%
60%
55%
50%
45%

YEAR 0 YEAR 1 YEAR 2 YEAR 3 YEAR 4 YEAR 5 YEAR 6

AVERAGE NEW- AND USED-CAR PRICES

NEW   USED

PRICE

$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0

NEW:
$32,997 $33,931 $34,775 $36,154 $37,285

USED:
$18,200 $18,800 $19,200 $19,700 $20,200

2015   2016   2017   2018   2019

YEAR

Sources:
Kelley Blue Book, June new-car transaction prices
Edmunds, Q1 used-car transaction prices

RoadLoans.com

CONSUMER REDUCED THEIR BUDGET DUE TO EXPECTED ECONOMIC DOWNTURN AND THUS WILL SHIFT TO BUYING A USED CAR OVER A NEW ONE

46%

43%

11%

As **46%** respondents said that they decreased their budget due to the global pandemic

I have reduced my budget

No, It is the same

Yes, Increased my budget

Out of the 46% People who decreased the budget, **50%** switched to used car.

Change in Purchase Preference

■ New Cars ■ Used Cars

60%

69%

40%

31%

Pre Covid-19 Preference

Post Covid-19 Preference

22.5% of the consumers who were preferring to buy new car would now prefer to buy used car

Total Respondents- (N= 2300)

Used car market valued at 24.24 Billion in 2019 and expected increase 15,12% (2020-2025)

Too much vehicle aspect and data to define used car price

We are a tech consultant, help your company to grow stronger, faster, and precise.

"New Normal, New Way"

Goal and Objective:

1. Speed up the process of estimating used car prices
2. Giving business insights for your company

Business Insight

Prices vs Age

Semakin berumur semakin matang?
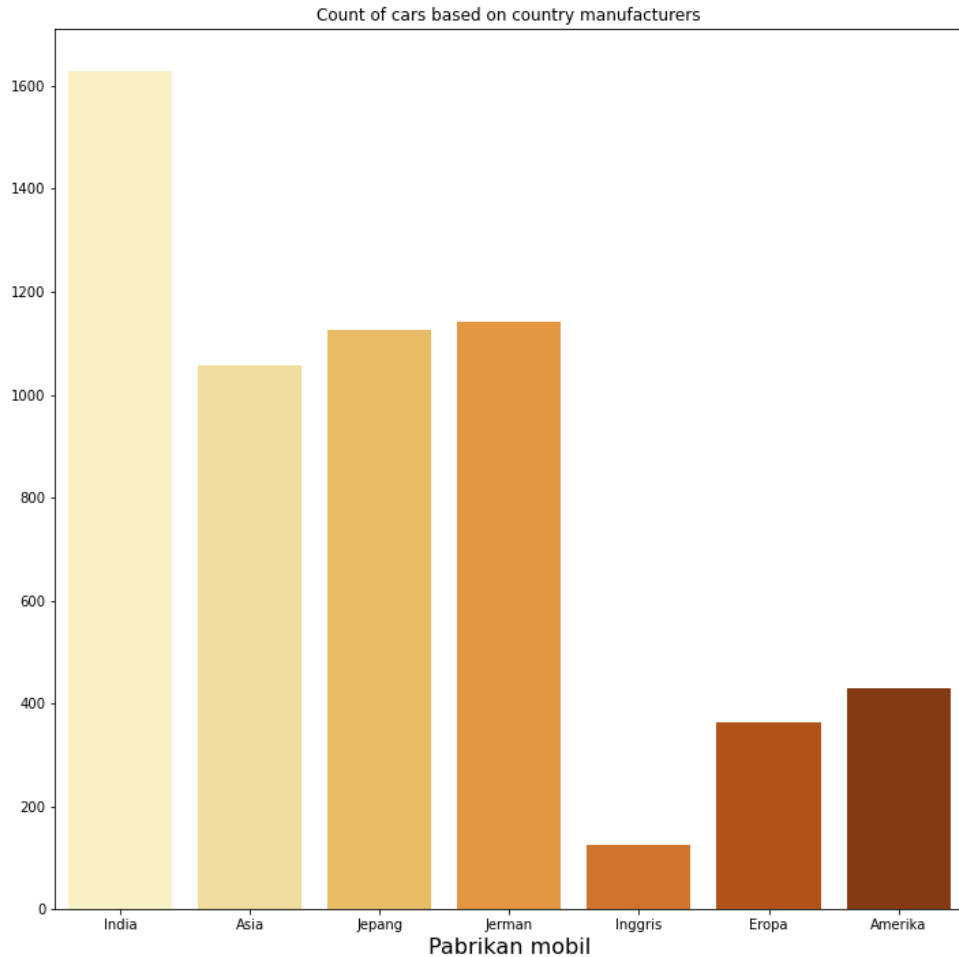
Tidak!! Semakin tua mobil semakin turun harganya

Count of cars based on manufacturers
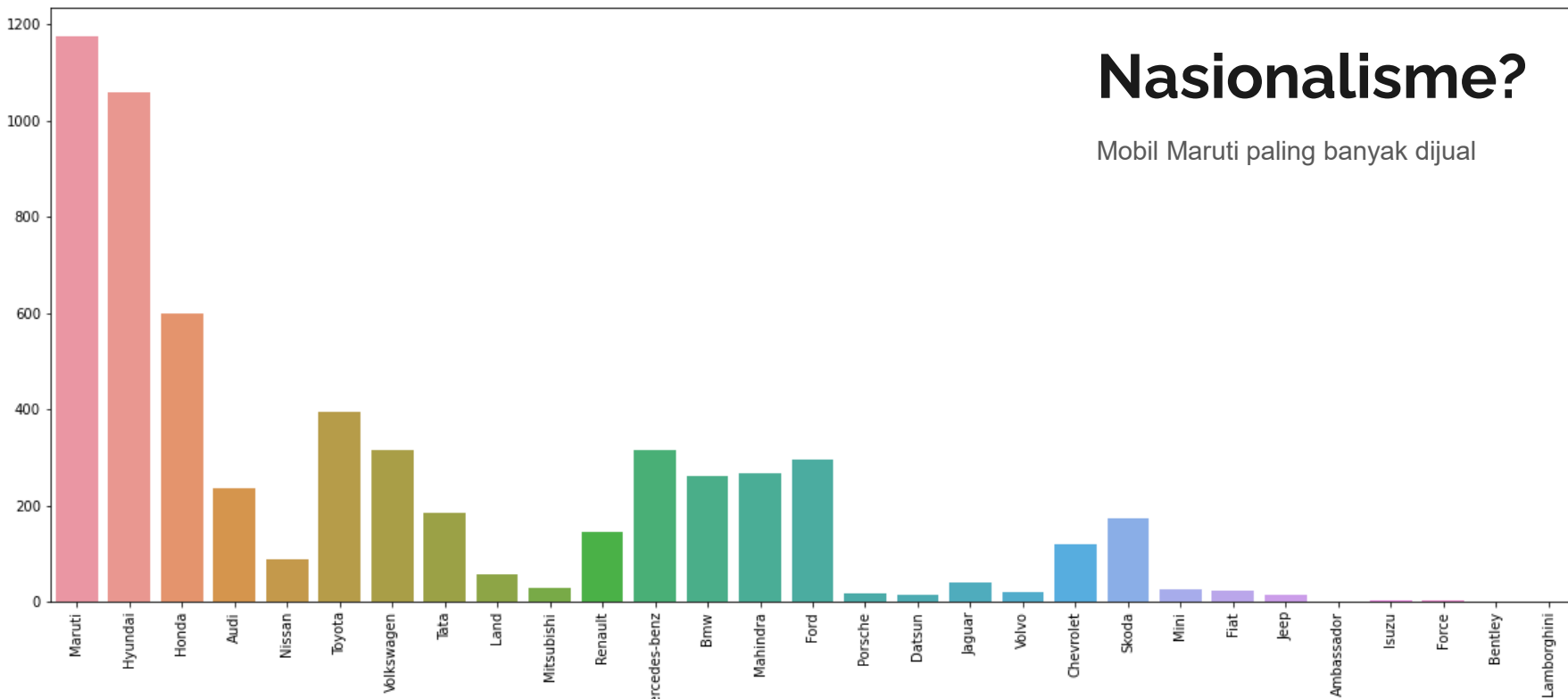
Nasionalisme?

Mobil Maruti paling banyak dijual

Count of cars based on country manufacturers

Nasionalisme!

Mobil lokal (India) paling banyak dijual

Nasionalisme?!

Mobil lokal (India) paling banyak dijual
TIDAK BERLAKU UNTUK SEMUA
LOKASI
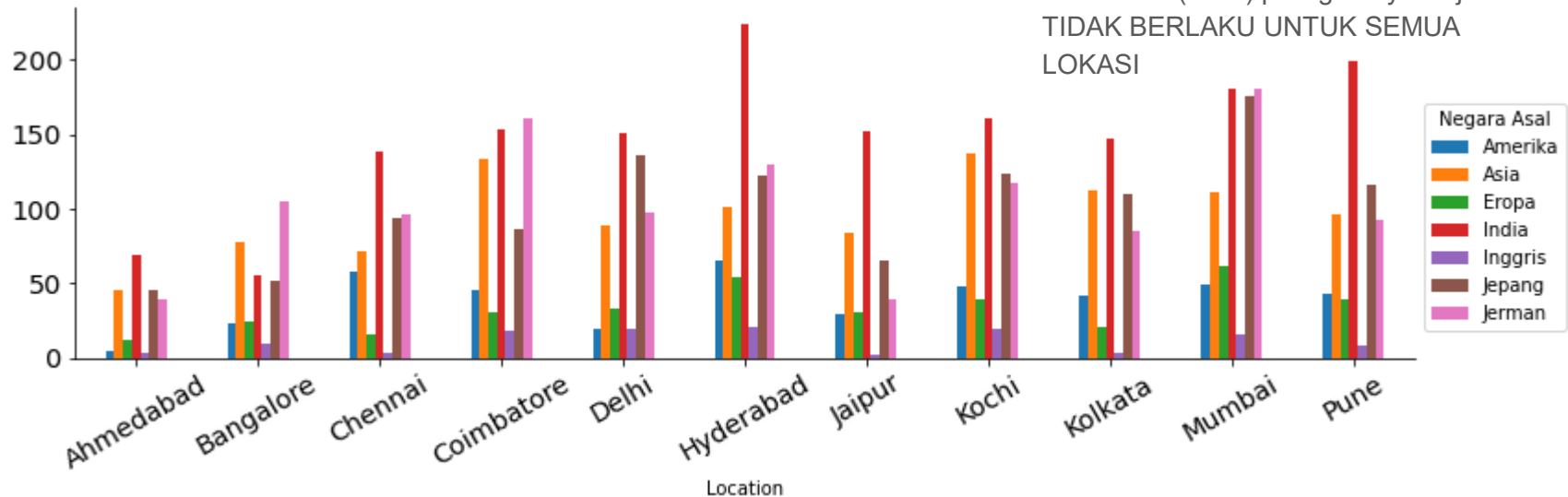
What the???

- GDP di atas rata-rata
- Infrastruktur mendukung
- Ramah terhadap orang asing
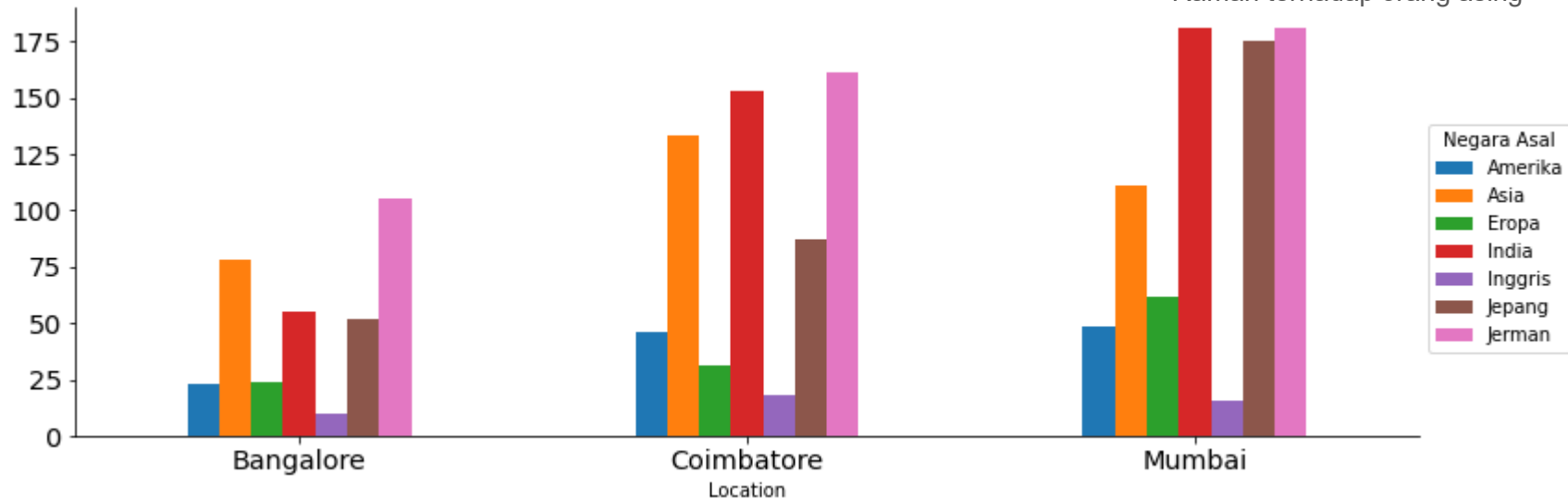
Data pre-processing

Data Pre-Processing

01

Data Exploration

Memahami isi data
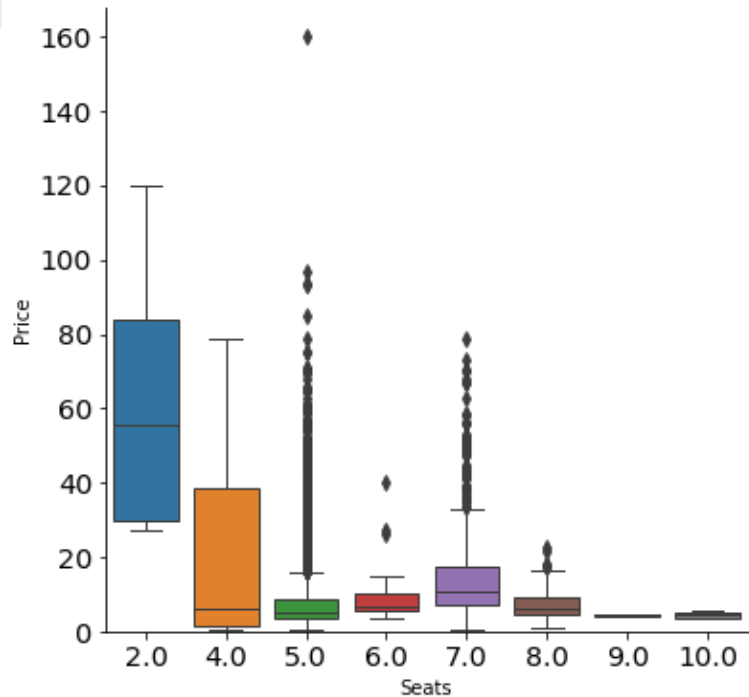
Data Cleansing

Pembersihan data

02

03

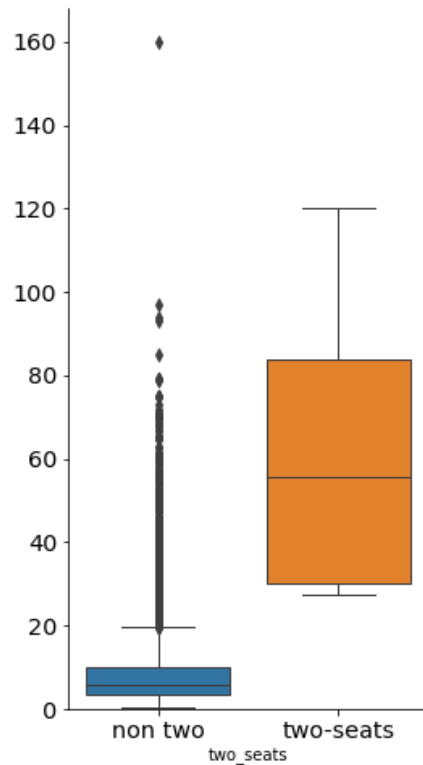**Feature Engineering**

Memilih fitur yang berkorelasi dengan tujuan
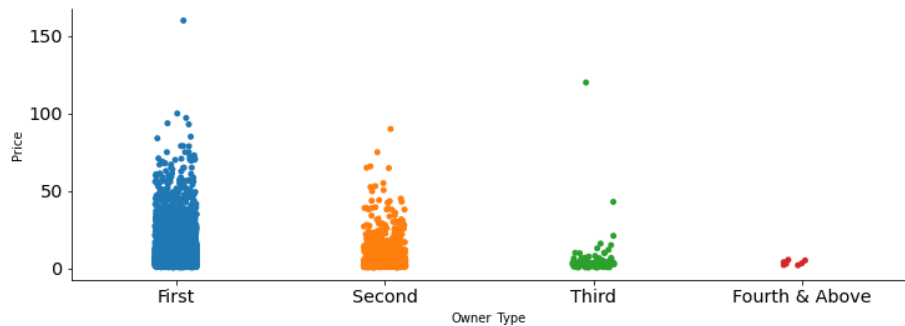
Diubah menjadi
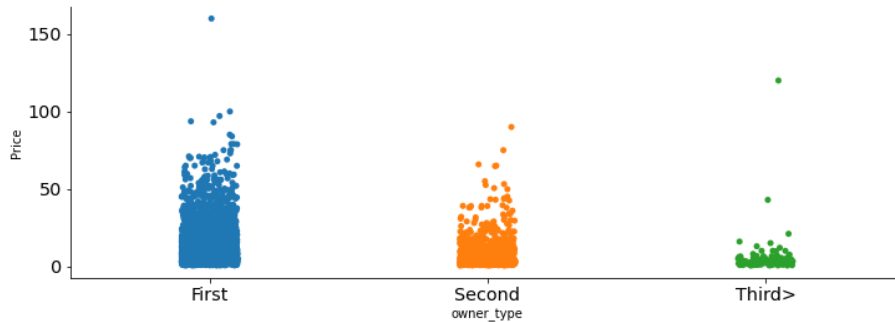
Diubah menjadi

Feature Selection

Age

Kilometer Driven

Mileage

Fuel Type

Brand (Country)

Two Seats

Power

Engine

Owner Type

Transmission

Proposed solution

Modelling

Linear Regression

R^2

0.73

MAE

0.25

Ridge

R^2

0.73

MAE

0.26

Random Forest

R²

0.90

MAE

0.09

List

(EDA , Preprocessing)

(Machine Learning)

 (Business Insight dan Visualisasi)

(Data Insight)