1. Operation New Fleet

* Takes part averagely every 13 months ( Each year 92% of the fleet is replaced)
* Many things to take into account -- --> They know better.

One of the key factors should be fuel consumtion

2)Current Fuel consumption

Car rental sell their cars between 25 to 40 thousands of miles.

According to our data the average consumption is 23.5 mpg --> 10L/100 km

Fuel consumption means money and CO2 emissions

A company desires to save money

A modern company is concerned about the CO2 emissions. Fuel used on transportation one of the main causes of Co2 emissions

3)Benefits of a low fuel consumption

What would lower fuel consumption mean for the company?

Low costs on refuelling. ( Λιγότερα φράγκα που χαλούν για καύσιμα)

Low fuel consumption--> less Liters of fuel per car-->less carbon dioxide emissions. Fuel used on transportation one of the main causes of Co2 Emissions (PITA ME TA EMISSIONS ). ΟΙ ΕΤΑΙΡΕΙΕΣ ΤΟΥ ΣΗΜΕΡΑ ΠΡΟΣΕΧΟΥΝ ΠΟΛΥ ΜΕ ΤΑ EMISSIONS

(ΕΔΩ ΔΥΟ ΣΕΛΙΔΕΣ ΜΕ ΔΙΑΓΡΑΜΜΑΤΑ ΓΙΑ ΕΞΟΔΑ ΛΟΓΩ ΒΕΝΖΙΝΗΣ ΚΑΙ ΕMISSIONS )

4)Our model

Dataset attributes and mpg

398 cars

EDA from our Data Science Team

Machine learning algorithm to predict the mpg

Results ratio of the algorithm

How the algo makes your company better

Diagrams with comparing fuel consumption before and after algo( Examples with the over 50% and the over 75% cars.

Translate these two examples with money per year and emissions per year.

5) Technical analysis

1. EDA
   1. Inspect if data contain missing values
   2. Study distributions of the data
   3. Study correlations of the data
   4. Make assumptions
2. Preprocessing
   1. Fix cylinder error values (3 -> 4, 5 -> 6)
   2. Train horsepower regression model
   3. Use model to fill horsepower missing values
   4. Drop rows with N/A mpg
   5. Build dummies for origin, cylinders
   6. Extract brand\_name from car\_name
   7. Encode categorial values of brand\_name
3. Model Evaluation
   1. Build custom evaluation algorithm
   2. Evaluate various regression algorithms
   3. Choose the best regression algorithm
   4. Optimize the regression algorithm
   5. **Build optimized model**

QUESTIONS??

Interesting Papers / Sources:

https://www.researchgate.net/profile/Md-Islam-113/publication/278670801\_Consumer\_purchase\_intention\_towards\_environmentally\_friendly\_vehicles\_an\_empirical\_investigation\_in\_Kuala\_Lumpur\_Malaysia/links/558a5e5308ae2affe7154642/Consumer-purchase-intention-towards-environmentally-friendly-vehicles-an-empirical-investigation-in-Kuala-Lumpur-Malaysia.pdf