Bike Sales

Abstract:

This data contains bicycle sales 6 countries and the relationship between leading profits with the age groups of the people and according to male and female and the needs that can be purchased when buying a bicycle and we can predict using machine learning future prices once the product is placed and therefore the machine will make the decision

Design:

This data was analyzed by reviewing bicycle data and extracting insights into sales in each of their countries. And calculate the percentage of profits in each of the countries. Also, who buys bikes more, males or females, and what are the most expensive types of bikes, who the most years in which bikes were sold?

The results were presented in graphic images that easily simulate this information.

Data:

In this dataset 113018 rows and 18 columns and main column is sales, in this column Sales According to male and female or Products and number of each product and its sales.

Algorithms:

- Importing the data and then reading it to know the number of rows and columns.etc

It does not contain null values

Duplicate values have been eliminated

- All questions answered in graphs

Determine of product category in each country

Determine the most types of bikes to buy. Road bikes It is the most purchased by males and females

Determine the number of the age group most interested in bicycles: 35-64 are the most interested.

- Converting data from object to numbers
- The data has been divided to create a new model that predicts profits
- We used 3 types of models and the best result is Polynomial Regression degree = 4

Tools:

1. Numpy
2. Pandas
3. Matplotlib
4. Seaborn
5. Sklearn

6. Patsy
7. Statsmodels.

Communication:

Presentation , Visualization and Calculating the degree of the model.