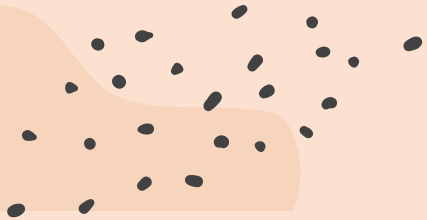
أكاديمية سدايا
SDAIA Academy

Nutrition



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Introduction

The nutrition industry is currently experiencing huge growth. Increasing awareness of how diet affects health.
Set against a backdrop of busy lifestyles and global health concerns, the nutrition market looks set to skyrocket as people look for quick and easy solutions.
From this point we get inspiration to talk about nutrition and health grocery market and predict price of it.
By doing web scrubbing from IHERB.com

workflow

1- scraping our data

2- cleaning the data

3- linear regression model

4- feature engineering

5- best model

6- Testing model

Scraping Data

- We scraped 3000+ product by using BeautifulSoup

Data Feature

Name: the name of the product.

Class_info: the name of the category the product belongs to (Sports-Nutrition, Grocery)

Weight: the size measurement of the products

Ratings: the average rate of the product.

Reviews: the number of customers reviews on the product

Target

Price: product cost

Tools

BeautifulSoup

Collect the data from website

Pandas

Explore and clean data

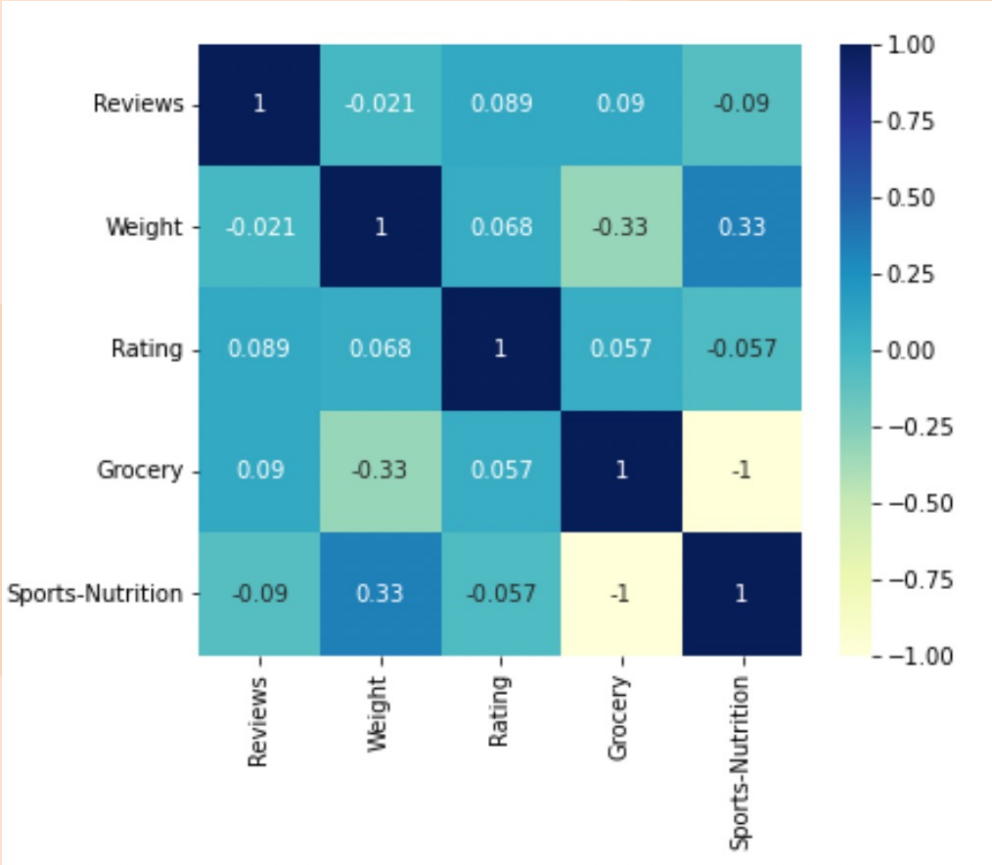
Sklearn

Models training

Matplotlib and Seaborn

Visualize data and model

Correlation



FEATURE ENIGNEEARING

- First score with out dummy variables for testing R^2 : 0.570
- score with dummy variables testing R^2: 0.6621

Results:

MODEL	R square (Train 60%)	R square (Val 20%)	R square (Testing)	MAE	RMSE
Linear Regression	0.682	0.679	0.684	10.0587	14.49
Polynomial degree2	0.707	0.67	0.667	9.825	13.917

The Chosen model:

As we see here we pick linear regression depends on the minimum difference between R square and testing R square which mean the model learn from linear regression better than polynomial regression and fit the data.

Recommendations

- The linear regression is best model we got

We prefer to :

- Add more features.
- Collect more product in the data.

Than You