**Code :**

**# random forest for feature importance on a regression problem**

**from sklearn.datasets import make\_regression**

**from sklearn.ensemble import RandomForestRegressor**

**from matplotlib import pyplot**

**import pandas as pd**

**# define dataset**

**from google.colab import files**

**uploaded = files.upload()**

**data = pd.read\_csv('ekm\_data.csv')**

**print(data)**

**X, y = make\_regression(n\_samples=163, n\_features=16, n\_informative=5, random\_state=1)**

**# define the model**

**model = RandomForestRegressor()**

**# fit the model**

**model.fit(X, y)**

**# get importance**

**importance = model.feature\_importances\_**

**# summarize feature importance**

**for i,v in enumerate(importance):**

**print('Feature: %0d, Score: %.5f' % (i,v))**

**# plot feature importance**

**pyplot.bar([x for x in range(len(importance))], importance)**

**pyplot.show()**

**Output :**

**Saving ekm\_data.csv to ekm\_data.csv**

**City Date PM2.5 PM10 ... Toluene Xylene AQI AQI\_Bucket**

**0 Ernakulam 22-01-2020 37.48 80.65 ... 1.01 0.12 NaN NaN**

**1 Ernakulam 23-01-2020 NaN NaN ... NaN NaN NaN NaN**

**2 Ernakulam 24-01-2020 41.13 68.71 ... 1.87 0.31 NaN NaN**

**3 Ernakulam 25-01-2020 53.00 84.58 ... 1.93 0.19 154.0 Moderate**

**4 Ernakulam 26-01-2020 58.31 85.47 ... 1.83 0.18 153.0 Moderate**

**.. ... ... ... ... ... ... ... ... ...**

**157 Ernakulam 27-06-2020 12.14 27.94 ... 1.43 0.09 108.0 Moderate**

**158 Ernakulam 28-06-2020 8.97 21.47 ... 0.98 0.00 106.0 Moderate**

**159 Ernakulam 29-06-2020 12.22 24.97 ... 0.30 0.04 109.0 Moderate**

**160 Ernakulam 30-06-2020 11.87 30.24 ... 0.00 0.00 109.0 Moderate**

**161 Ernakulam 01-07-2020 5.88 13.91 ... 0.00 0.00 111.0 Moderate**

**[162 rows x 16 columns]**

**Feature: 0, Score: 0.00724**

**Feature: 1, Score: 0.00892**

**Feature: 2, Score: 0.01273**

**Feature: 3, Score: 0.01085**

**Feature: 4, Score: 0.00856**

**Feature: 5, Score: 0.29366**

**Feature: 6, Score: 0.00809**

**Feature: 7, Score: 0.30898**

**Feature: 8, Score: 0.01400**

**Feature: 9, Score: 0.00630**

**Feature: 10, Score: 0.00630**

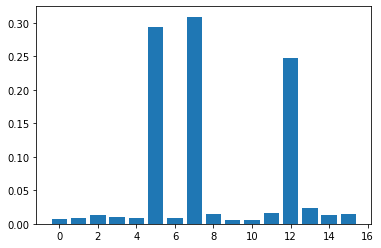
**Feature: 11, Score: 0.01537**

**Feature: 12, Score: 0.24780**

**Feature: 13, Score: 0.02305**

**Feature: 14, Score: 0.01321**

**Feature: 15, Score: 0.01496**

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