ML5

May 23, 2022

[2]:
```
# Apply Linear Regression technique of machine learning to analyze
# the Diabetes dataset
# Display accuracy of the model.Find the equation of the best fit line for this␣
 ↪data.
```

[40]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
from sklearn.datasets import load_diabetes
from sklearn.model_selection import cross_val_score
```

[29]:
```
diabetes = load_diabetes()
X = diabetes.data
y = diabetes.target
```

[30]:
```
print(X.shape)
print(y.shape)
```

```
(442, 10)
(442,)
```

[37]:
```
lr = LinearRegression()
lr.fit(X,y)
```

[37]:
```
LinearRegression()
```

[38]:
```
lr.score(X,y)
```

[38]:
```
0.5177494254132934
```

[41]:
```
lr_scores = cross_val_score(lr,X,y,cv=5)
```

[42]:
```
lr_scores.mean()
```

[42]:
```
0.4823181221114939
```

[43]:
```
lr.coef_
```

[43]:
```
array([ -10.01219782, -239.81908937,  519.83978679,  324.39042769,
        -792.18416163,  476.74583782,  101.04457032,  177.06417623,
         751.27932109,   67.62538639])
```

[44]:
```
lr.intercept_
```

[44]:
```
152.1334841628965
```

[ ]:
```

```