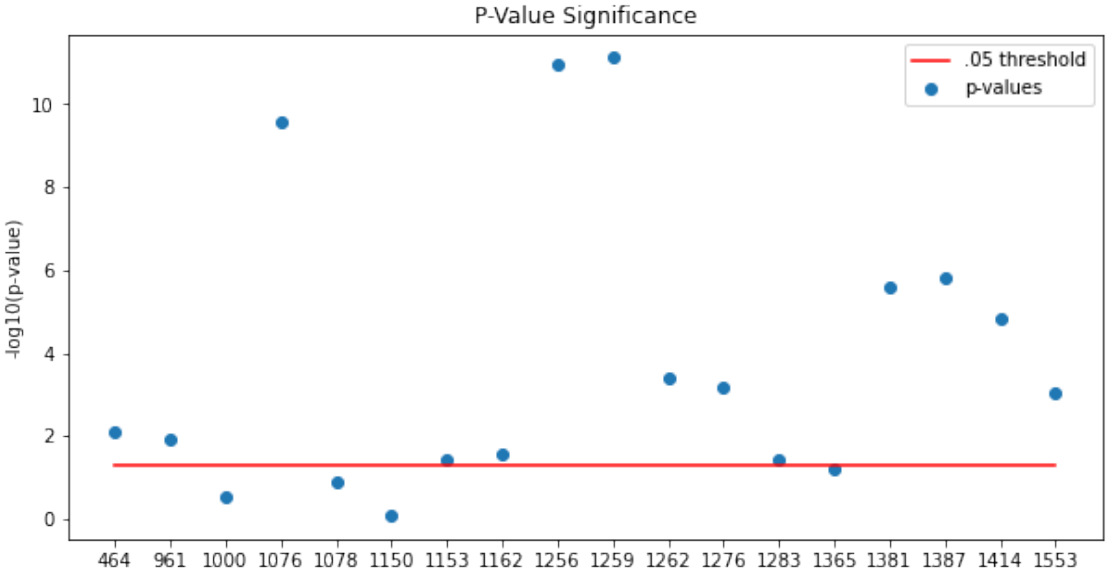
report_executed

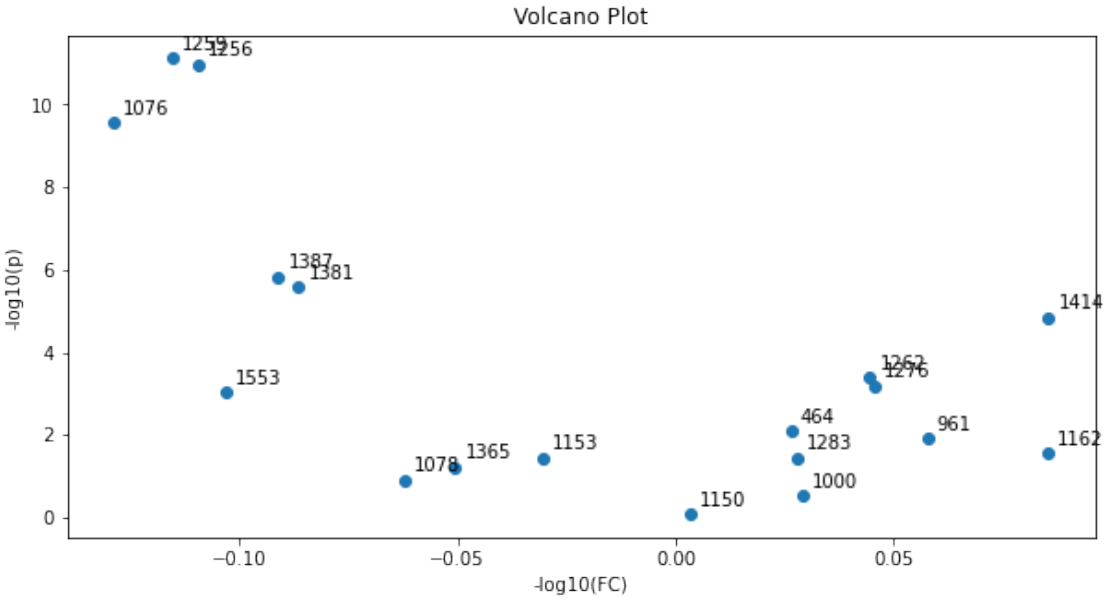
July 13, 2021

1 Statistics

T-test

`3.9.5`

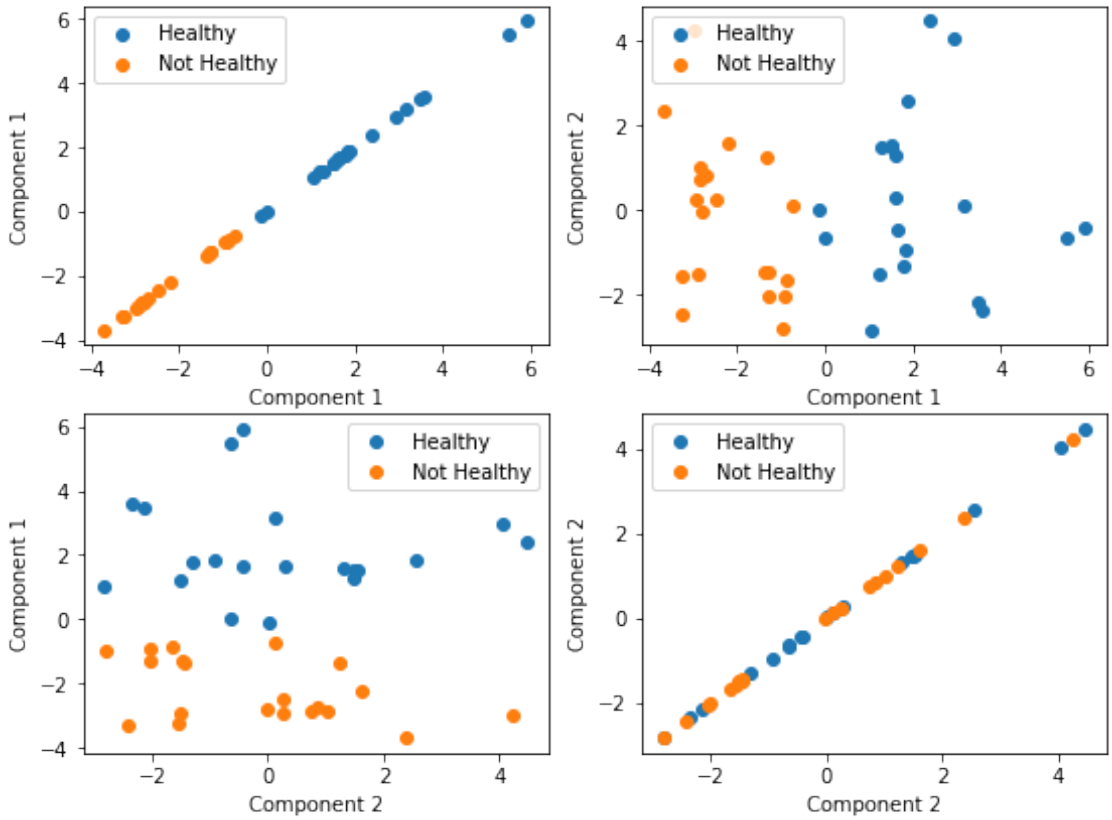




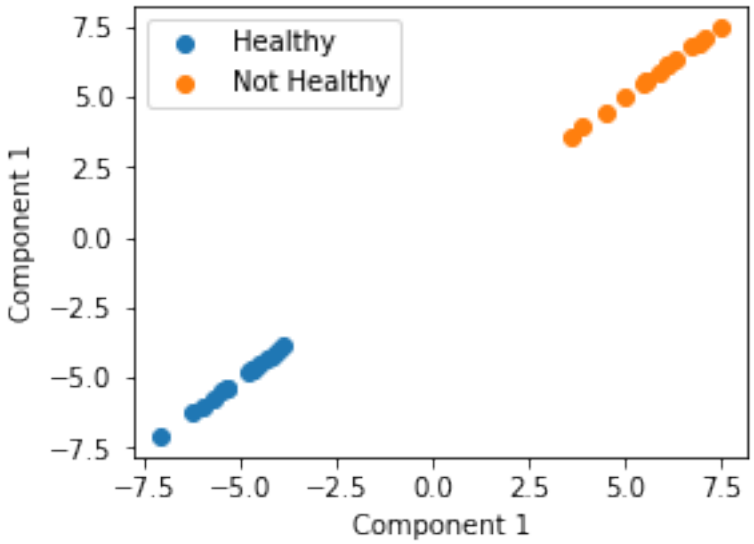
2 Dimension-Reduction

PCA, LDA

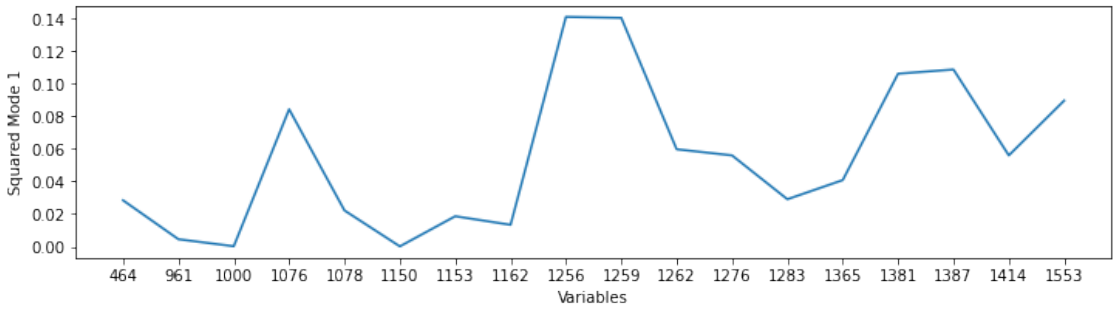
```
PCA Projections
Projections of data into latent space.
Data is colored by response
```



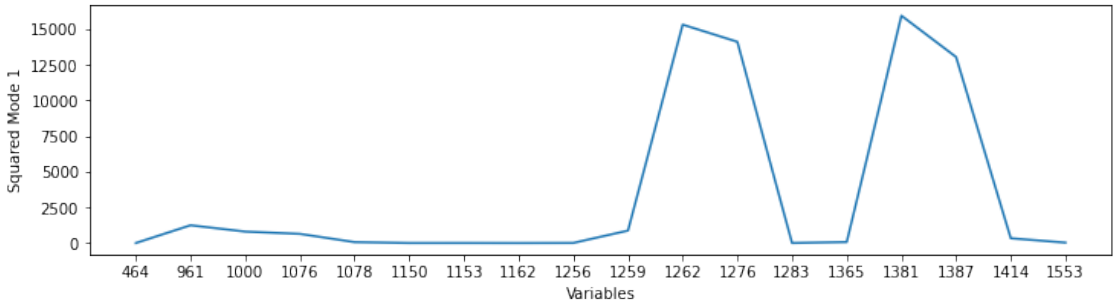
LDA Projections
Projections of data into latent space.
Data is colored by response



PCA Vectors
Plotting the squared loadings of the latent space transformation vectors
A Larger magnitude indicates larger importance for corresponding feature



LDA Vectors
Plotting the squared loadings of the latent space transformation vectors
A Larger magnitude indicates larger importance for corresponding feature



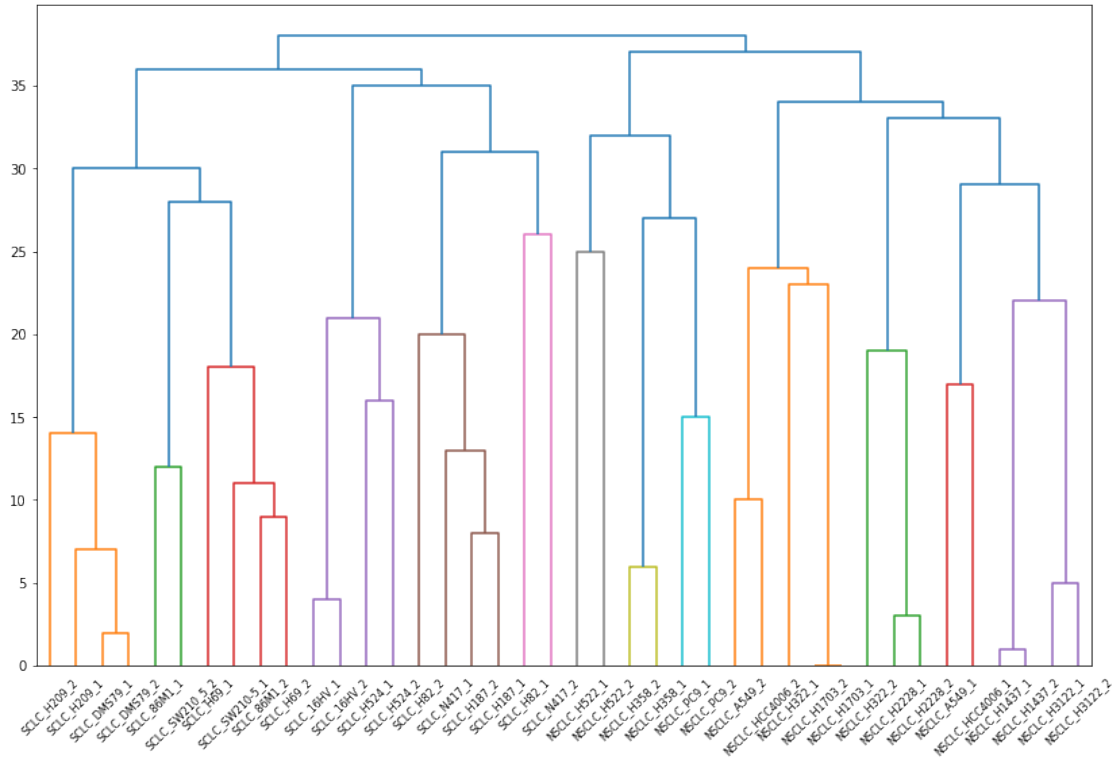
3 Clustering

K-means, hierarchical,

	Cluster 1	Cluster 2	Cluster 3
0	NSCLC_A549_1	NSCLC_H522_1	SCLC_86M1_2
1	NSCLC_H1703_2	NSCLC_H522_2	SCLC_DMS79_1
2	NSCLC_H1703_1	NSCLC_PC9_1	SCLC_DMS79_2
3	NSCLC_A549_2	NSCLC_PC9_2	SCLC_H209_1
4	NSCLC_H1437_1	SCLC_86M1_1	SCLC_H209_2
5	NSCLC_H2228_1	SCLC_16HV_1	SCLC_H69_1
6	NSCLC_H2228_2	SCLC_16HV_2	SCLC_H82_1
7	NSCLC_H1437_2	SCLC_H187_2	SCLC_H69_2
8	NSCLC_H3122_1	SCLC_H187_1	SCLC_N417_2

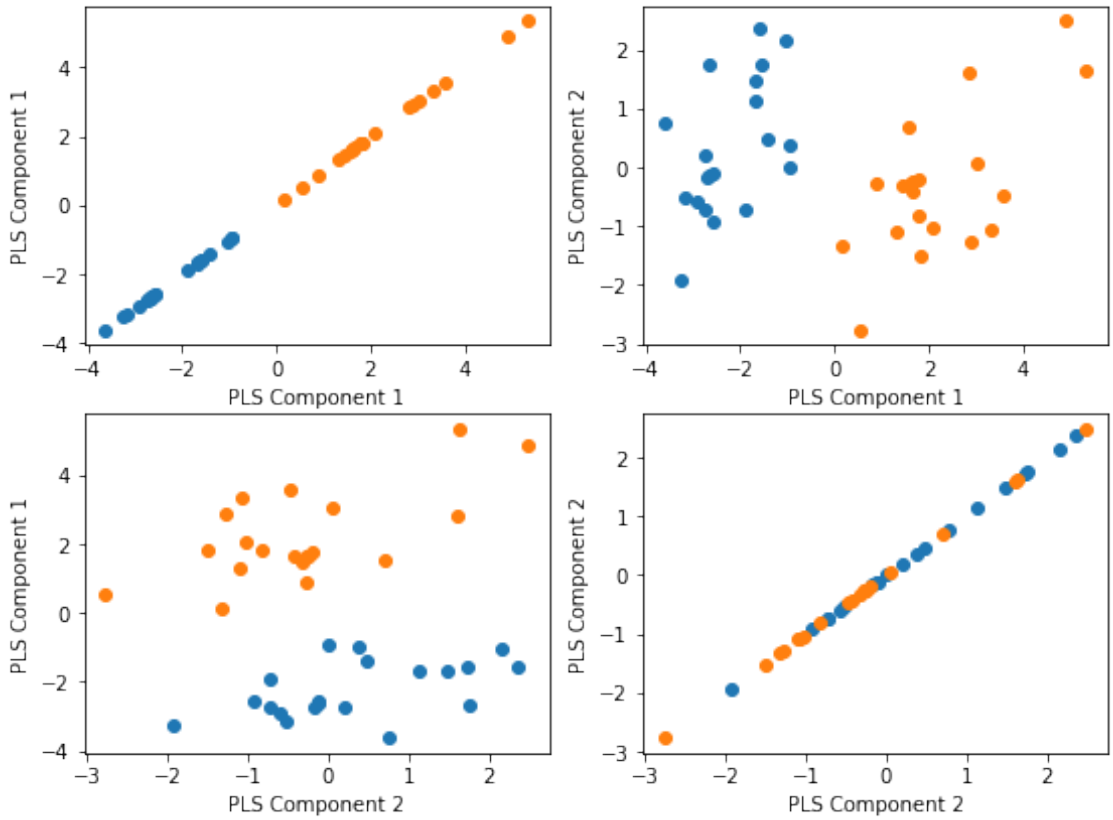
9	NSCLC_H322_2	SCLC_H524_1	SCLC_SW210-5_1
10	NSCLC_H322_1	SCLC_H524_2	NaN
11	NSCLC_H358_2	SCLC_H82_2	NaN
12	NSCLC_H3122_2	SCLC_N417_1	NaN
13	NSCLC_HCC4006_1	SCLC_SW210_5_2	NaN
14	NSCLC_H358_1	NaN	NaN
15	NSCLC_HCC4006_2	NaN	NaN

	Cluster 1	Cluster 2	Cluster 3
0	SCLC_86M1_2	NSCLC_A549_1	NSCLC_H358_2
1	SCLC_86M1_1	NSCLC_H1703_2	NSCLC_H522_1
2	SCLC_16HV_1	NSCLC_H1703_1	NSCLC_H522_2
3	SCLC_16HV_2	NSCLC_A549_2	NSCLC_H358_1
4	SCLC_DMS79_1	NSCLC_H1437_1	NSCLC_PC9_1
5	SCLC_DMS79_2	NSCLC_H2228_1	NSCLC_PC9_2
6	SCLC_H187_2	NSCLC_H2228_2	NaN
7	SCLC_H187_1	NSCLC_H1437_2	NaN
8	SCLC_H209_1	NSCLC_H3122_1	NaN
9	SCLC_H524_1	NSCLC_H322_2	NaN
10	SCLC_H209_2	NSCLC_H322_1	NaN
11	SCLC_H524_2	NSCLC_H3122_2	NaN
12	SCLC_H69_1	NSCLC_HCC4006_1	NaN
13	SCLC_H82_1	NSCLC_HCC4006_2	NaN
14	SCLC_H82_2	NaN	NaN
15	SCLC_H69_2	NaN	NaN
16	SCLC_N417_2	NaN	NaN
17	SCLC_N417_1	NaN	NaN
18	SCLC_SW210-5_1	NaN	NaN
19	SCLC_SW210_5_2	NaN	NaN

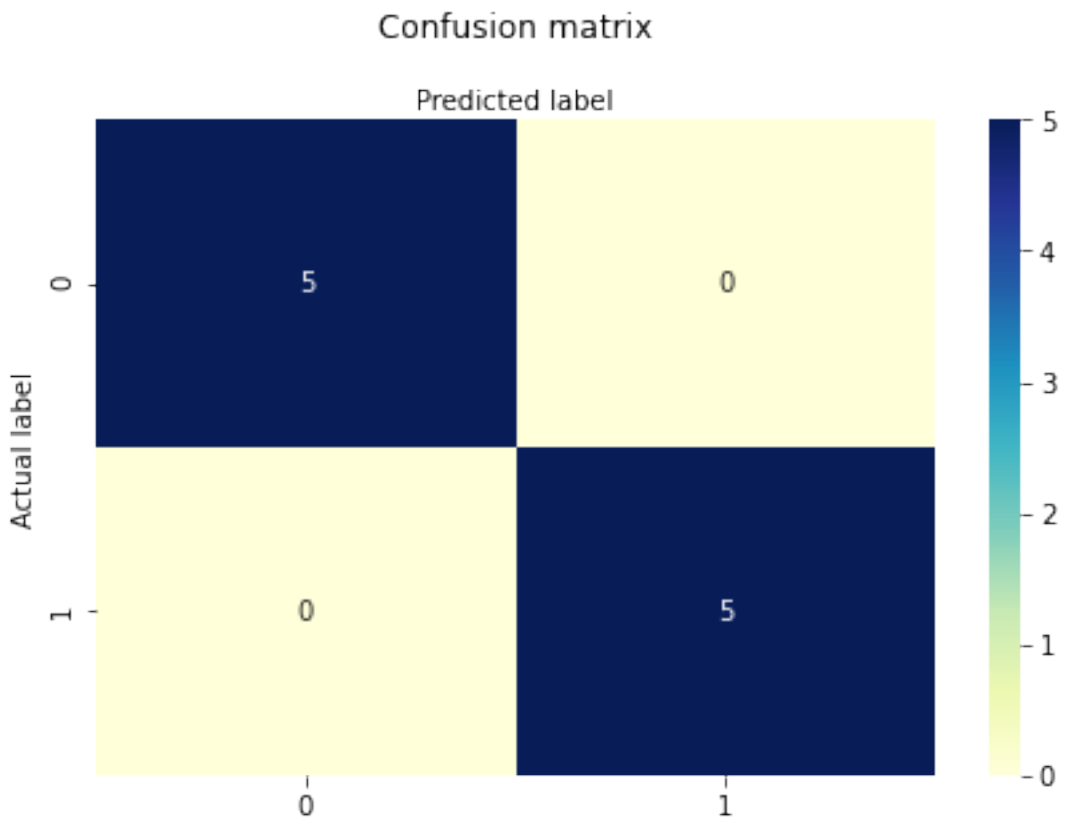


4 Classification

PLS-DA, SVM, random forests, logstic regression

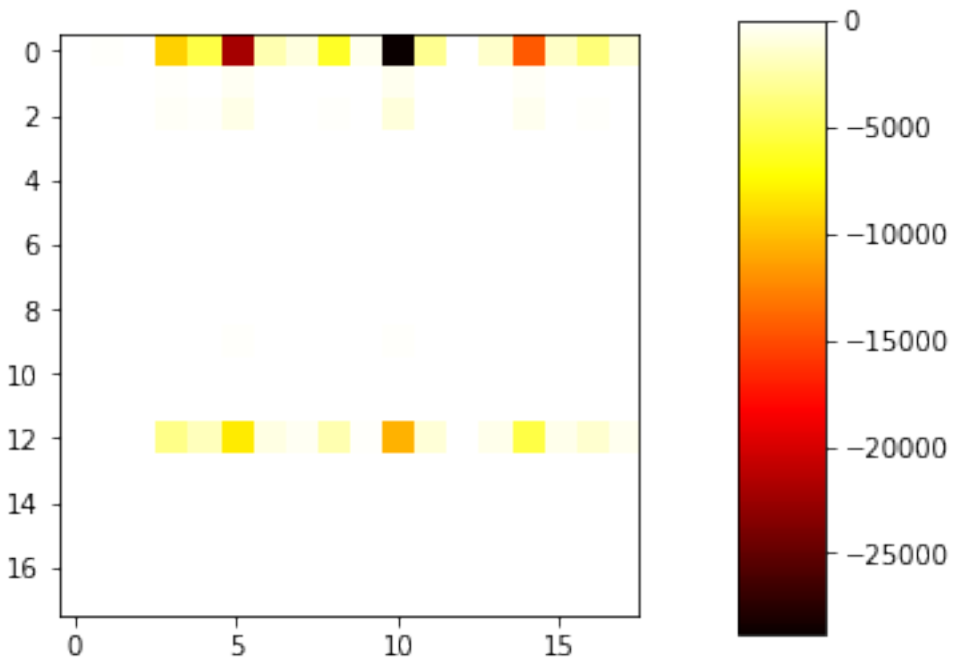



```
SVM Validated Parameters:  {'kernel': 'linear', 'shrinking': True}
Random Forest Validated Parameters:  {'criterion': 'gini', 'n_estimators': 10}
SVM: R^2=1.0 Q^2=1.0
RF: R^2=1.0 Q^2=1.0
Accuracy: 1.0
<modules.adapml_classification.Classification object at 0x11d2be9d0>
```



5 Regression

Linear regression


0
2
4
6
8
10
12
14
16
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15
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−5000
−10000
−15000
−20000
−25000