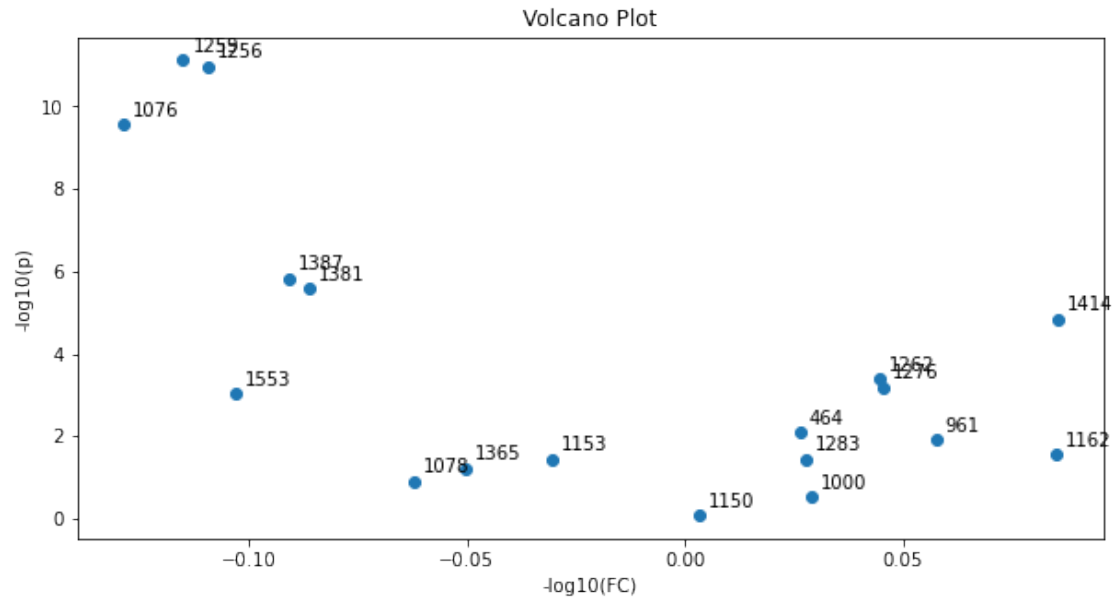# report_executed

July 12, 2021

1 Statistics

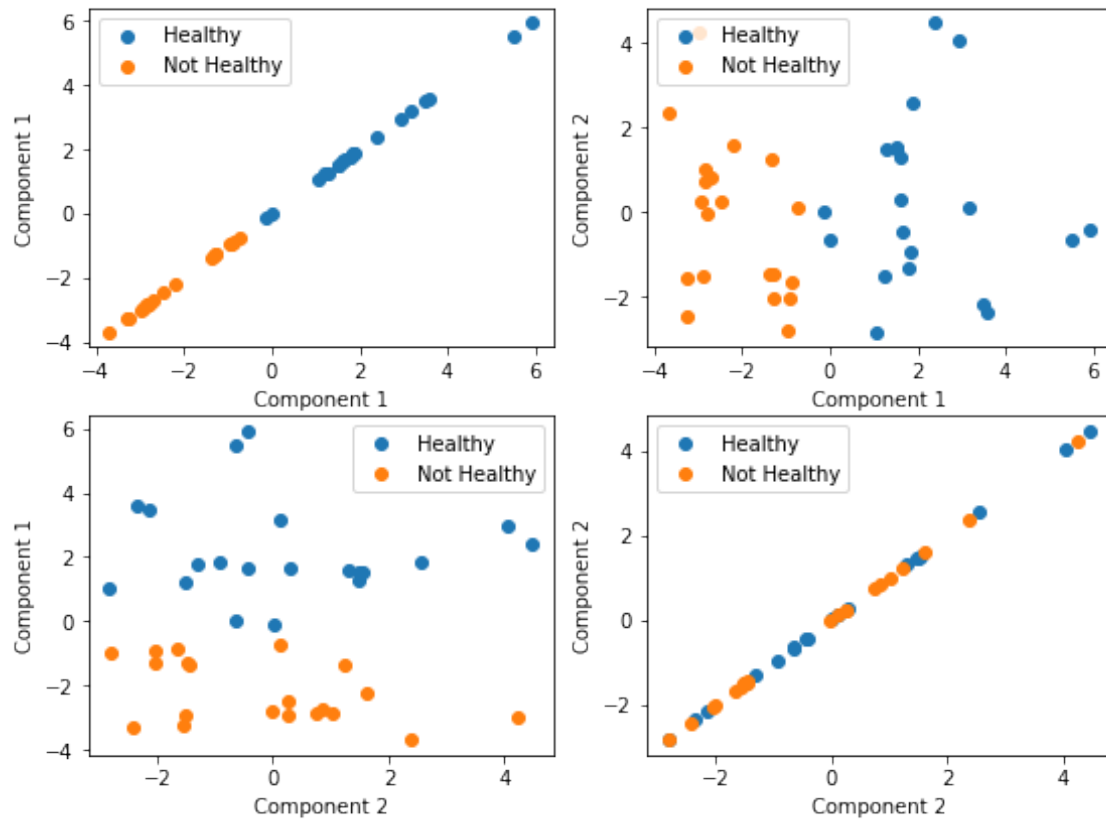T-test

Volcano Plot
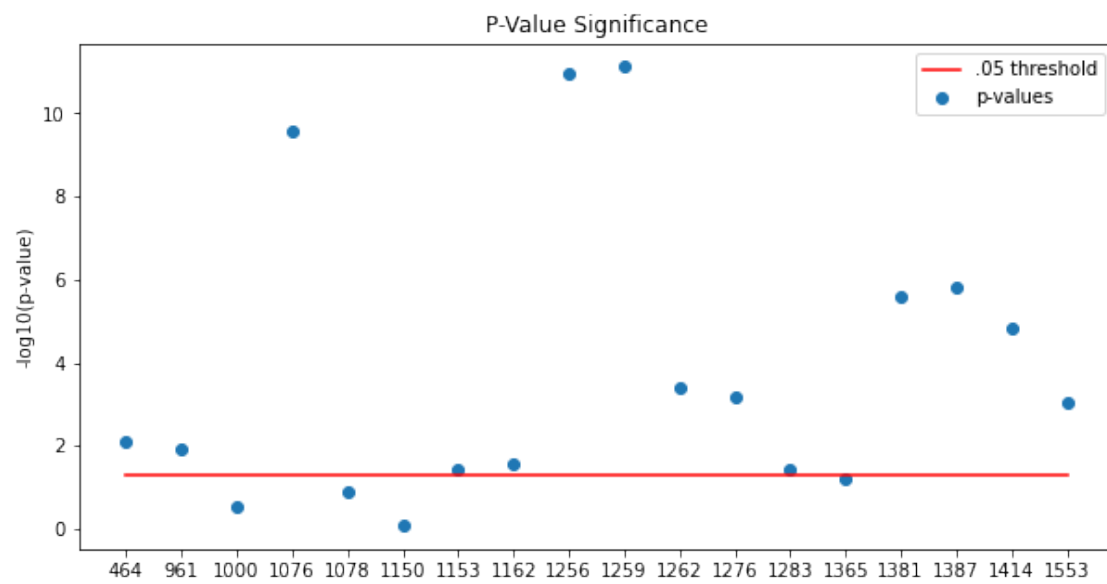
2 Dimension-Reduction

PCA, LDA

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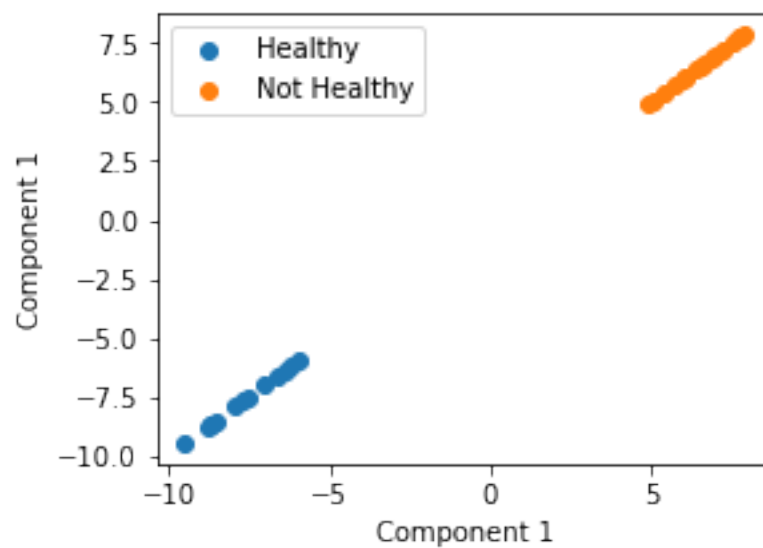
LDA Projections
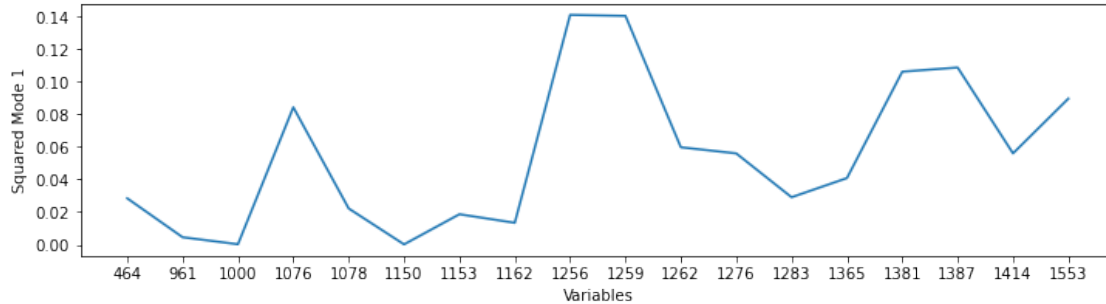Projections of data into latent space.
Data is colored by response

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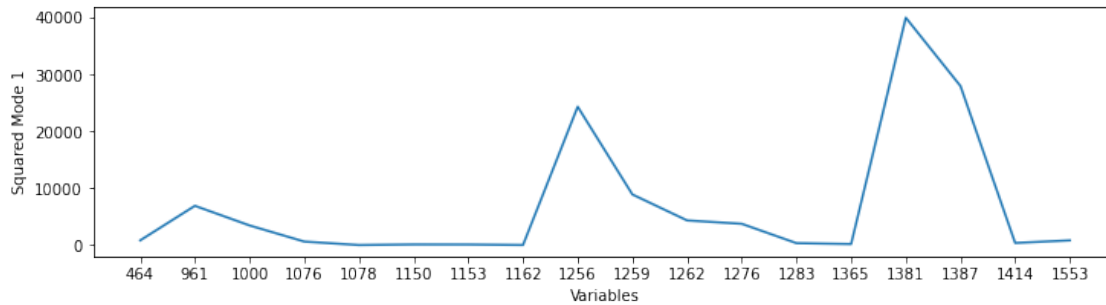Plotting the squared loadings of the latent space transformation vectors
A Larger magnitude indicates larger importance for corresponding feature

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	SCLC_86M1_2	NSCLC_H522_1	NSCLC_A549_1
1	SCLC_86M1_1	NSCLC_H522_2	NSCLC_H1703_2
2	SCLC_DMS79_1	NSCLC_PC9_1	NSCLC_H1703_1
3	SCLC_DMS79_2	NSCLC_PC9_2	NSCLC_A549_2
4	SCLC_H209_1	SCLC_16HV_1	NSCLC_H1437_1
5	SCLC_H209_2	SCLC_16HV_2	NSCLC_H2228_1
6	SCLC_H69_1	SCLC_H187_2	NSCLC_H2228_2
7	SCLC_H82_1	SCLC_H187_1	NSCLC_H1437_2
8	SCLC_H69_2	SCLC_H524_1	NSCLC_H3122_1

9	SCLC_SW210-5_1	SCLC_H524_2	NSCLC_H322_2
10	NaN	SCLC_H82_2	NSCLC_H322_1
11	NaN	SCLC_N417_2	NSCLC_H358_2
12	NaN	SCLC_N417_1	NSCLC_H3122_2
13	NaN	SCLC_SW210_5_2	NSCLC_HCC4006_1
14	NaN	NaN	NSCLC_H358_1
15	NaN	NaN	NSCLC_HCC4006_2

	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
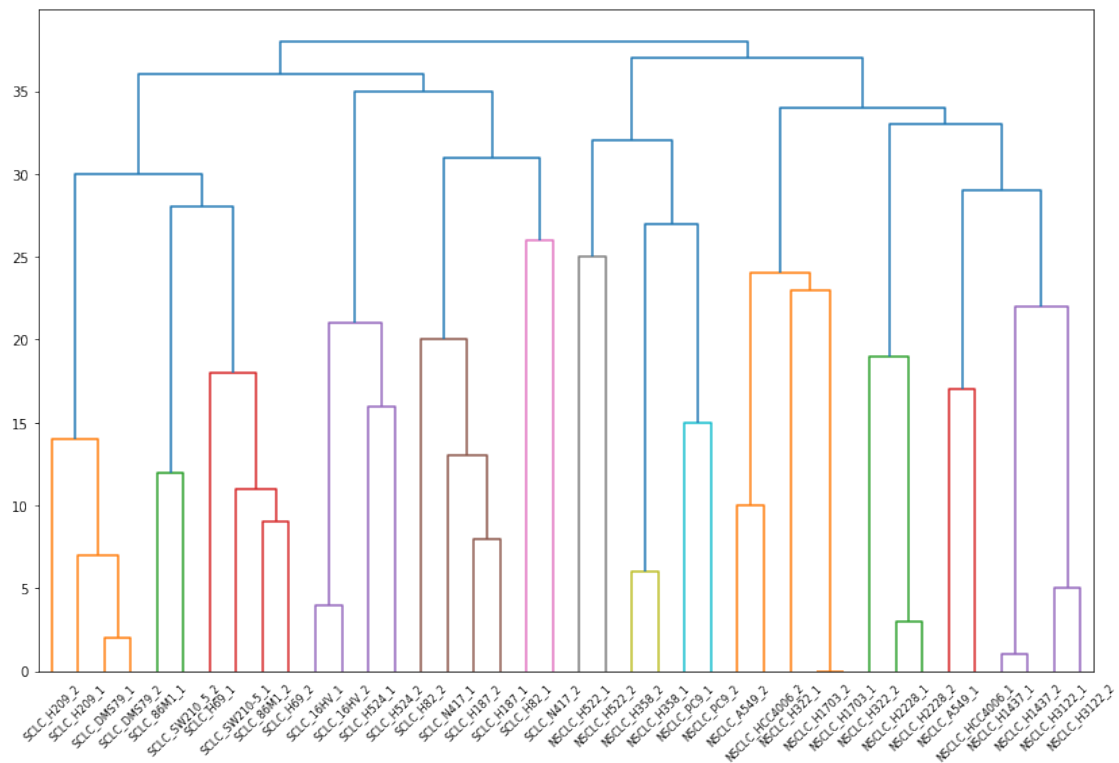
4 Classification

PLS-DA
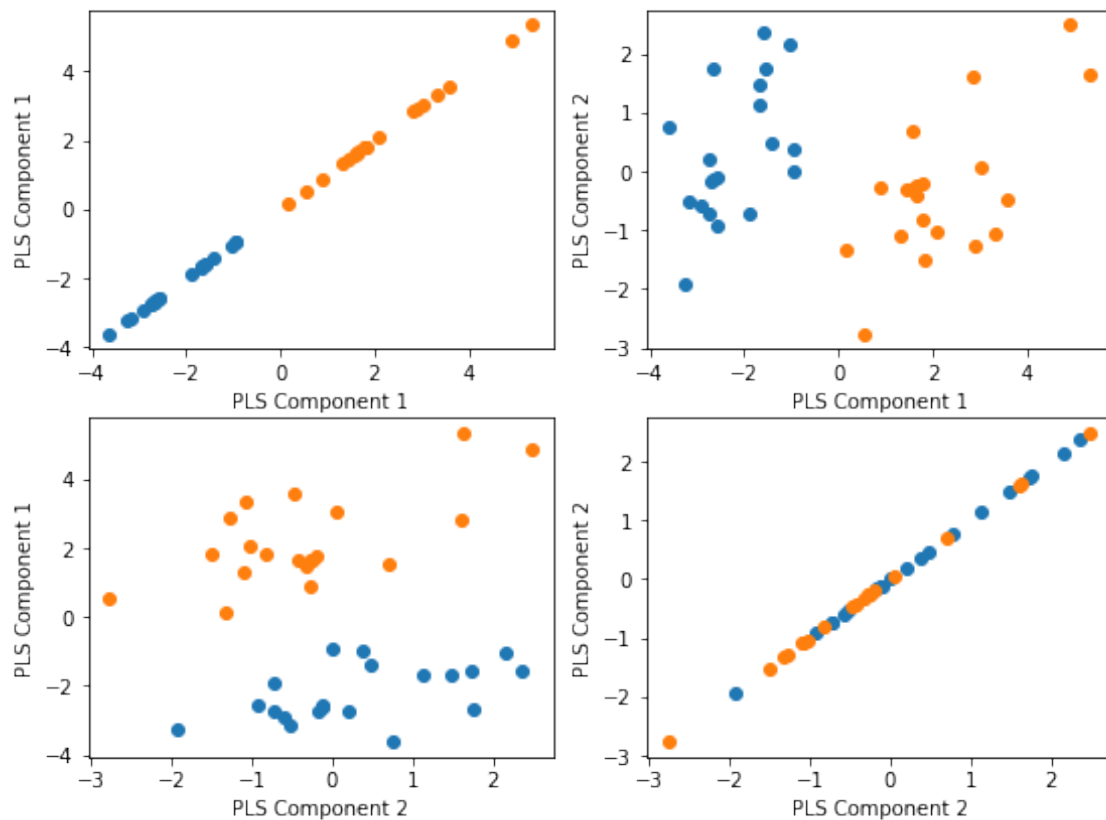
```
SVM Validated Parameters:  {'kernel': 'linear', 'shrinking': True}
Random Forest Validated Parameters:  {'criterion': 'gini', 'n_estimators': 10}
SVM: R^2=1.0 Q^2=1.0
RF: R^2=1.0 Q^2=0.55
```

5   Regression

Linear regression