Feature Selection (FS) workflow report

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Introduction

The report summarizing the Feature Selection pipeline results.

Feature Selection workflow

Naive Random Forest (RF) implementation for variable importance evaluation.

Dataset

Triple-Negative Breast Cancer (TNBC) proteome. Label-free deep proteome analysis of 44 (samples and technical repliques) human breast specimens.

Summary stats from training phase

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## Information not available for this FS workflow implementation
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Summary stats from testing phase

Table 1: Classification metrics from twenty class-balanced and randomized runs.

run	Variables	Accuracy	Kappa	AccuracyPValue
1	1490	1	1	2.216e-07
2	1479	0.8462	0.806	9.42e-05
3	1475	1	1	2.216e-07
4	1484	0.9231	0.9008	6.703e-06
5	1468	0.8462	0.803	9.42e-05
6	1475	0.8462	0.7969	9.42e-05
7	1448	0.7692	0.7111	0.000816
8	1456	0.8462	0.803	9.42e-05
9	1492	1	1	2.216e-07
10	1477	0.8462	0.7969	9.42e-05
11	1439	0.8462	0.7969	9.42e-05
12	1479	0.9231	0.8984	6.703e-06
13	1514	0.9231	0.8984	6.703e-06
14	1457	1	1	2.216e-07
15	1480	0.8462	0.803	9.42e-05
16	**1419**	**1**	**1**	**2.216e-07**
17	1473	1	1	2.216e-07
18	1472	1	1	2.216e-07
19	1464	0.8462	0.806	9.42e-05
20	1515	1	1	2.216e-07

Accuracy_Mean	Accuracy_SD	Accuracy_Max
0.9154	0.07853	1

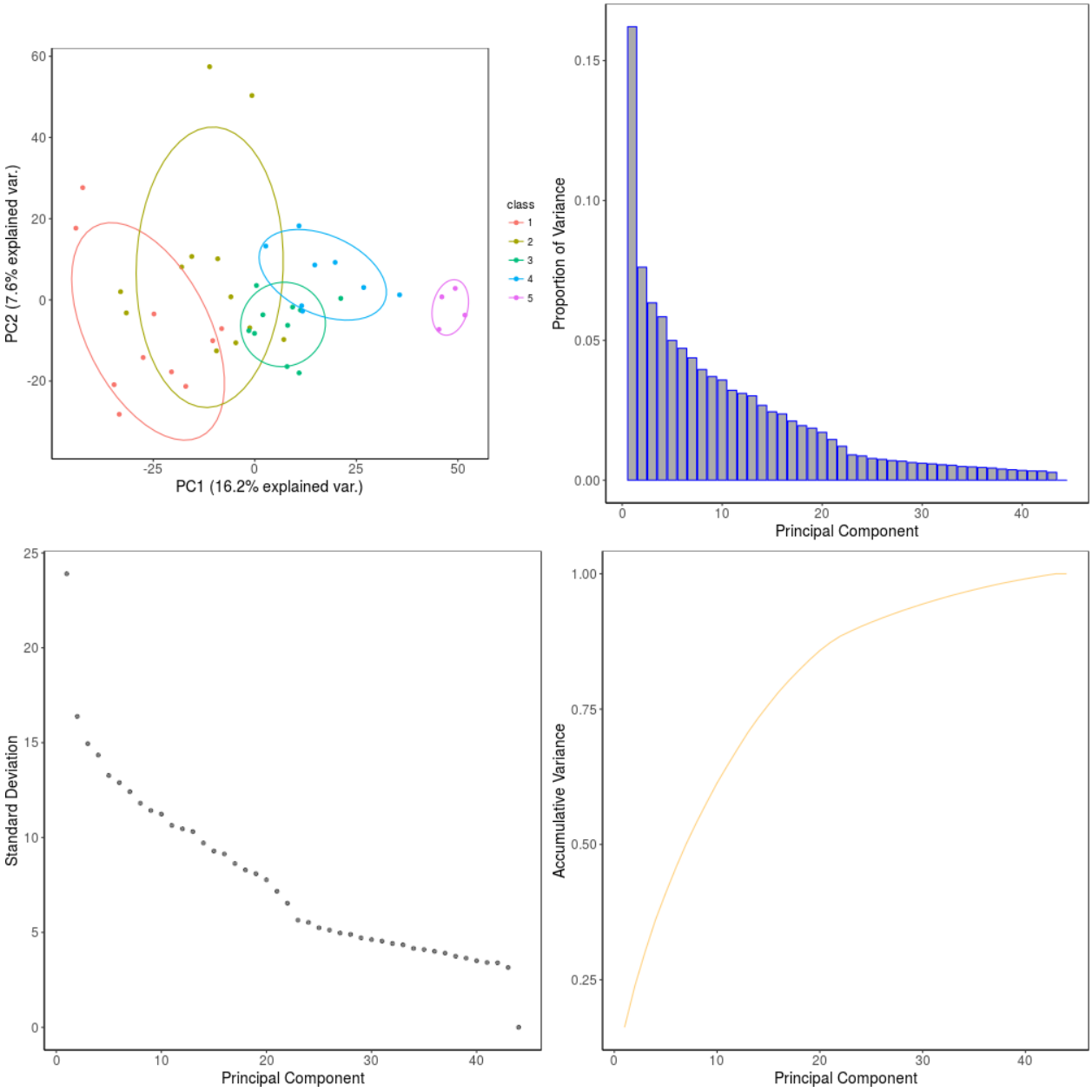
Workflow runtime

0.371 minutes

Plots

Visualization of the classification using PCA

- Groups distribution on the first two Principal Components (PC1 and PC2) from the original data (without apply any FS method).



- Groups distribution on the first two Principal Components (PC1 and PC2) after to apply the FS workflow.