exp missing rate report

The missing function is:

$$p = \frac{1}{\exp(\gamma \times |y|)}$$

For missing rate at 80%, for lasso,

```
##                           L_inf_norm          rho tn0en0 tn0e0 t0e0 t0en0
## Method1_full               0.1212725 0.000000e+00      3     0 2.87  2.13
## 0.5 * rho                  0.1212725 2.826920e-02      3     0 3.53  1.47
## 1 * rho                    0.1212725 5.653840e-02      3     0 4.00  1.00
## 2 * rho                    0.1209832 1.130768e-01      3     0 4.65  0.35
## Method2_complete           0.1564276 0.000000e+00      3     0 2.61  2.39
## 0.5 * rho                  0.1564276 3.562377e-02      3     0 3.45  1.55
## 1 * rho                    0.1564276 7.124754e-02      3     0 3.98  1.02
## 2 * rho                    0.1555837 1.424951e-01      3     0 4.70  0.30
## Method3_logistics_our   1002.0000000 0.000000e+00      3     0 0.00  5.00
## 0.5 * rho               1002.0000000 3.335000e+02      3     0 0.00  5.00
## 1 * rho                 1002.0000000 6.670000e+02      3     0 0.00  5.00
## 2 * rho                 1002.0000000 1.334000e+03      3     0 5.00  0.00
```

For SCAD,

```
##                           L_inf_norm          rho tn0en0 tn0e0 t0e0 t0en0
## Method1_full               0.1108342 0.000000e+00      3     0 4.39  0.61
## 0.5 * rho                  0.1108342 2.595349e-02      3     0 4.51  0.49
## 1 * rho                    0.1108342 5.190698e-02      3     0 4.59  0.41
## 2 * rho                    0.1108342 1.038140e-01      3     0 4.72  0.28
## Method2_complete           0.1314446 0.000000e+00      3     0 4.50  0.50
## 0.5 * rho                  0.1314446 2.966394e-02      3     0 4.56  0.44
## 1 * rho                    0.1314446 5.932787e-02      3     0 4.66  0.34
## 2 * rho                    0.1314446 1.186557e-01      3     0 4.75  0.25
## Method3_logistics_our   1002.0000000 0.000000e+00      3     0 0.00  5.00
## 0.5 * rho               1002.0000000 3.335000e+02      3     0 0.00  5.00
## 1 * rho                 1002.0000000 6.670000e+02      3     0 0.00  5.00
## 2 * rho                 1002.0000000 1.334000e+03      3     0 5.00  0.00
```

For MCP,

```
##                           L_inf_norm          rho tn0en0 tn0e0 t0e0 t0en0
## Method1_full               0.1053053 0.000000e+00      3     0 4.64  0.36
## 0.5 * rho                  0.1053053 2.535140e-02      3     0 4.65  0.35
## 1 * rho                    0.1053053 5.070280e-02      3     0 4.69  0.31
## 2 * rho                    0.1053053 1.014056e-01      3     0 4.78  0.22
## Method2_complete           0.1199370 0.000000e+00      3     0 4.61  0.39
## 0.5 * rho                  0.1199370 2.958461e-02      3     0 4.64  0.36
## 1 * rho                    0.1199370 5.916922e-02      3     0 4.66  0.34
## 2 * rho                    0.1192629 1.183384e-01      3     0 4.80  0.20
## Method3_logistics_our   1002.0000000 0.000000e+00      3     0 0.00  5.00
## 0.5 * rho               1002.0000000 3.335000e+02      3     0 0.00  5.00
## 1 * rho                 1002.0000000 6.670000e+02      3     0 0.00  5.00
## 2 * rho                 1002.0000000 1.334000e+03      3     0 5.00  0.00
```

For missing rate at 60%, for lasso,

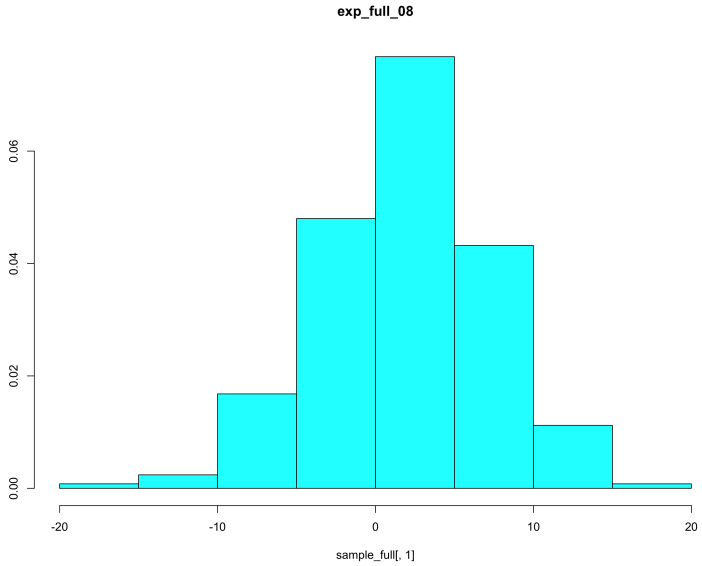
```
##                          L_inf_norm          rho tn0en0 tn0e0 t0e0 t0en0
## Method1_full              0.1171547 0.000000e+00      3     0 3.20  1.80
## 0.5 * rho                 0.1171547 2.743543e-02      3     0 3.76  1.24
## 1 * rho                   0.1171547 5.487086e-02      3     0 4.14  0.86
## 2 * rho                   0.1166607 1.097417e-01      3     0 4.58  0.42
## Method2_complete          0.2150482 0.000000e+00      3     0 2.49  2.51
## 0.5 * rho                 0.2150482 4.744046e-02      3     0 3.40  1.60
## 1 * rho                   0.2150482 9.488092e-02      3     0 3.98  1.02
## 2 * rho                   0.2147149 1.897618e-01      3     0 4.57  0.43
## Method3_logistics_our  1002.0000000 0.000000e+00      3     0 0.00  5.00
## 0.5 * rho              1002.0000000 3.335000e+02      3     0 0.00  5.00
## 1 * rho                1002.0000000 6.670000e+02      3     0 0.00  5.00
## 2 * rho                1002.0000000 1.334000e+03      3     0 5.00  0.00
```

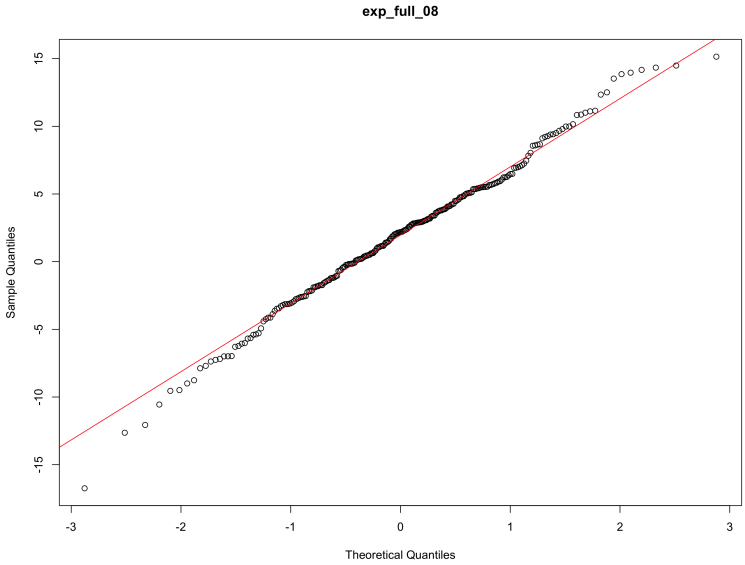
For SCAD,

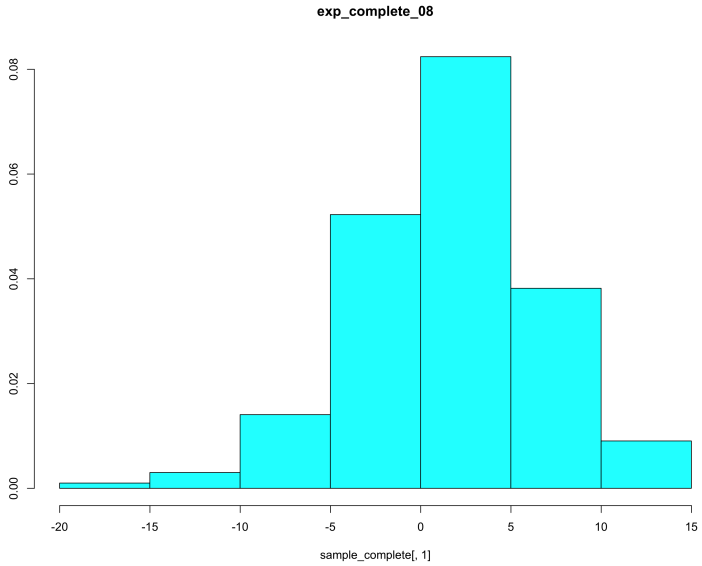
```
##                          L_inf_norm          rho tn0en0 tn0e0 t0e0 t0en0
## Method1_full              0.1095476 0.000000e+00      3     0 4.39  0.61
## 0.5 * rho                 0.1095476 2.632407e-02      3     0 4.55  0.45
## 1 * rho                   0.1095476 5.264815e-02      3     0 4.62  0.38
## 2 * rho                   0.1090185 1.052963e-01      3     0 4.80  0.20
## Method2_complete          0.1755221 0.000000e+00      3     0 4.31  0.69
## 0.5 * rho                 0.1755221 4.016052e-02      3     0 4.46  0.54
## 1 * rho                   0.1755221 8.032105e-02      3     0 4.56  0.44
## 2 * rho                   0.1753498 1.606421e-01      3     0 4.69  0.31
## Method3_logistics_our  1002.0000000 0.000000e+00      3     0 0.00  5.00
## 0.5 * rho              1002.0000000 3.335000e+02      3     0 0.00  5.00
## 1 * rho                1002.0000000 6.670000e+02      3     0 0.00  5.00
## 2 * rho                1002.0000000 1.334000e+03      3     0 5.00  0.00
```

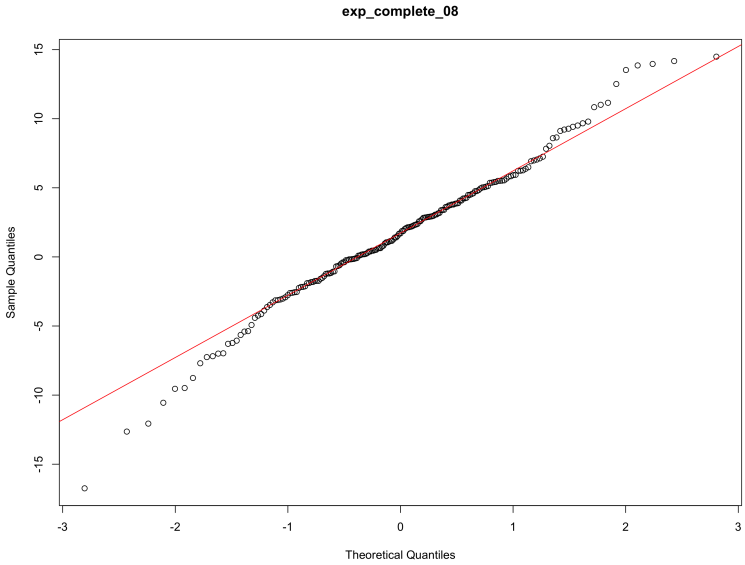
For MCP,

```
##                          L_inf_norm          rho tn0en0 tn0e0 t0e0 t0en0
## Method1_full              0.1099797 0.000000e+00      3     0 4.44  0.56
## 0.5 * rho                 0.1099797 2.624546e-02      3     0 4.45  0.55
## 1 * rho                   0.1099797 5.249092e-02      3     0 4.52  0.48
## 2 * rho                   0.1099063 1.049818e-01      3     0 4.65  0.35
## Method2_complete          0.1481144 0.000000e+00      3     0 4.78  0.22
## 0.5 * rho                 0.1481144 3.756732e-02      3     0 4.82  0.18
## 1 * rho                   0.1481144 7.513465e-02      3     0 4.87  0.13
## 2 * rho                   0.1481144 1.502693e-01      3     0 4.98  0.02
## Method3_logistics_our  1002.0000000 0.000000e+00      3     0 0.00  5.00
## 0.5 * rho              1002.0000000 3.335000e+02      3     0 0.00  5.00
## 1 * rho                1002.0000000 6.670000e+02      3     0 0.00  5.00
## 2 * rho                1002.0000000 1.334000e+03      3     0 5.00  0.00
```


exp_full_08
0.00
0.02
0.04
0.06
-20
-10
0
10
20
sample_full[, 1]


exp_full_08
Sample Quantiles
-15
-10
-5
0
5
10
15
-3
-2
-1
0
1
2
3
Theoretical Quantiles


exp_complete_08
0.00
0.02
0.04
0.06
0.08
-20
-15
-10
-5
0
5
10
15
sample_complete[, 1]


exp_complete_08
Sample Quantiles
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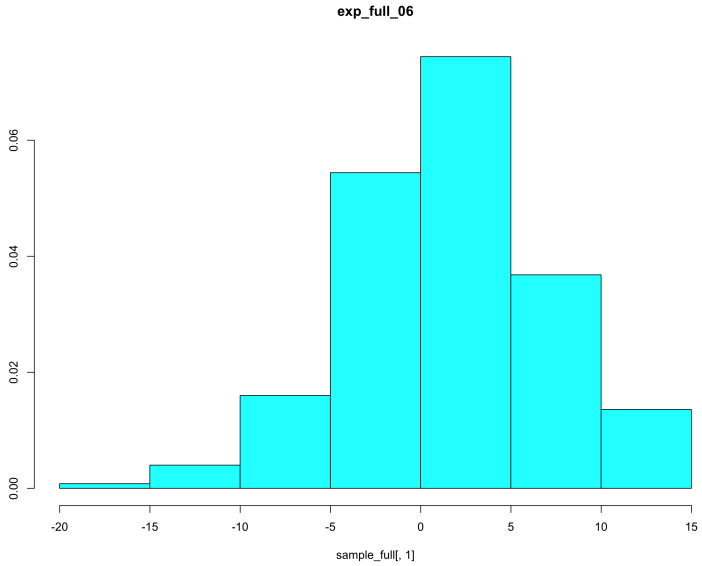
-10
-5
0
5
10
15
-3
-2
-1
0
1
2
3
Theoretical Quantiles


exp_full_06
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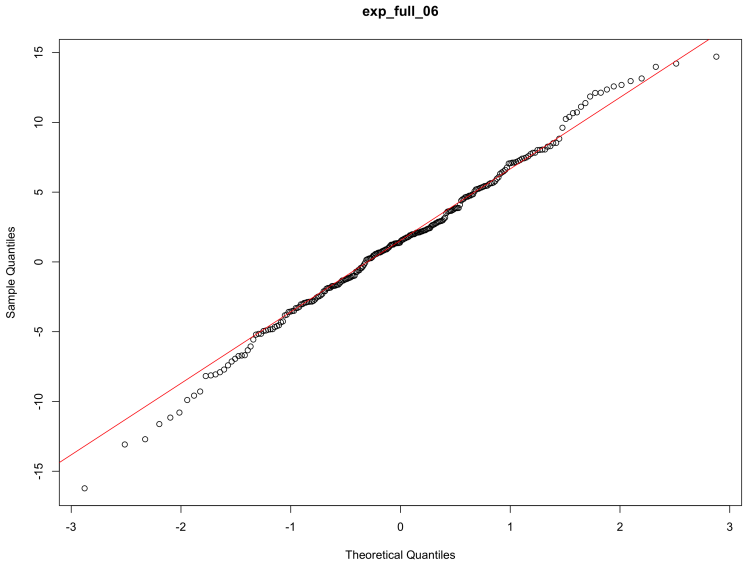
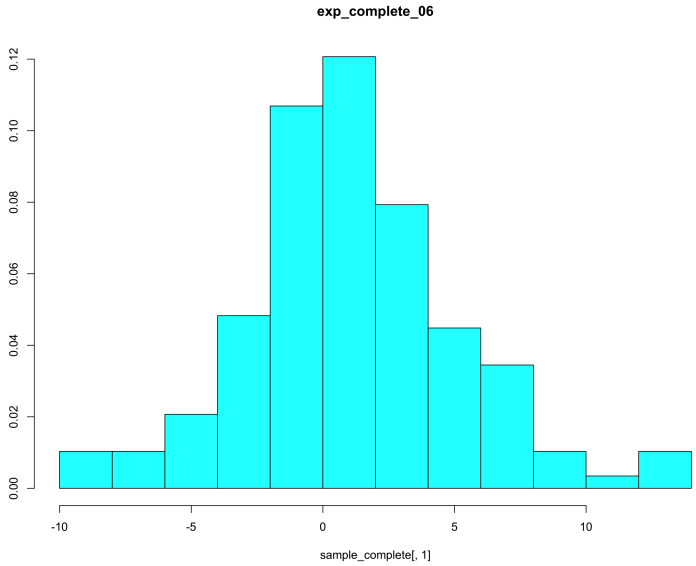
0.02
0.04
0.06
-20
-15
-10
-5
0
5
10
15
sample_full[, 1]


exp_full_06
Sample Quantiles
-15
-10
-5
0
5
10
15
-3
-2
-1
0
1
2
3
Theoretical Quantiles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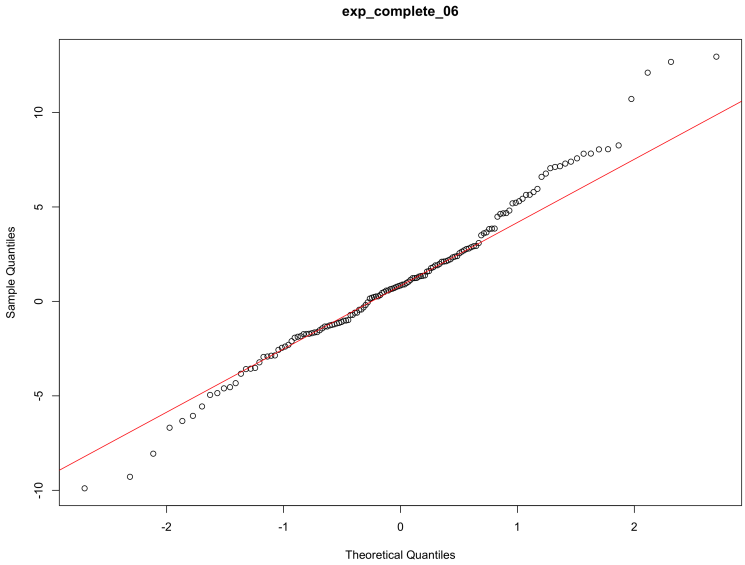
0.02
0.04
0.06
0.08
0.10
0.12
-10
-5
0
5
10
sample_complete[, 1]


exp_complete_06
Sample Quantiles
-10
-5
0
5
10
-2
-1
0
1
2
Theoretical Quantiles