

| | UniquelyMapped.Percent.Input | Unmapped.Percent.Input |
|----------|------------------------------|------------------------|
| CPG00100 | 70.25 | 10.97 |
| CPG00103 | 69.29 | 8.75 |
| CPG00104 | 64.60 | 11.24 |
| CPG00109 | 64.12 | 13.95 |
| CPG00110 | 66.38 | 15.01 |
| CPG00106 | 64.85 | 13.06 |

Quality metric
measurements

Quality metric
sign data

| Metric | Sign |
|------------------------------|------|
| UniquelyMapped.Percent.Input | pos |
| Unmapped.Percent.Input | neg |
| MultiMapped.Percent.Input | pos |
| UniquelyMapped.Percent.IP | pos |
| Unmapped.Percent.IP | neg |
| MultiMapped.Percent.IP | pos |

Calculate z-scores
for each sample
across every metric

| | UniquelyMapped.Percent.Input | Unmapped.Percent.Input |
|----------|------------------------------|------------------------|
| CPG00100 | 0.5448270 | -0.2082075 |
| CPG00103 | 0.4128804 | -0.7582011 |
| CPG00104 | -0.2318286 | -0.1164909 |
| CPG00109 | -0.2977887 | 0.3184017 |
| CPG00110 | -0.2620496 | 0.2078722 |
| CPG00106 | -0.1974444 | 0.4287780 |

Adjust the signs of
the z-scores

| | UniquelyMapped.Percent.Input | Unmapped.Percent.Input |
|----------|------------------------------|------------------------|
| CPG00100 | 0.0000000 | 0.0000000 |
| CPG00103 | 0.0000000 | 0.0000000 |
| CPG00104 | -0.2318089 | 0.0000000 |
| CPG00109 | -0.2977887 | -0.3184017 |
| CPG00110 | -0.2620496 | -0.2078722 |
| CPG00106 | -0.1974444 | -0.4287780 |

Accumulate total
quality score

| Sample | Sum |
|----------|-----------|
| CPG00104 | -1.644537 |
| CPG00100 | -1.648902 |
| CPG00103 | -1.679131 |
| CPG00109 | -1.807124 |
| CPG00110 | -2.009918 |
| CPG00106 | -2.057896 |

Find best fit
distribution

| distribution | KS.statistic | BIC.value |
|--------------|--------------|-----------|
| ivorm | FALSE | 342.1010 |
| gamma | FALSE | 346.2334 |
| weibull | TRUE | 350.2594 |
| norm | TRUE | 361.3964 |
| logis | FALSE | 362.2932 |

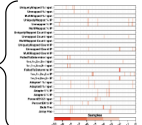
Outlier Detection:
Iterative or Cutoff
method

outlier_indices:iterative_res outlier_labels
#> [1] "CPG00107" "CPG00102" "CPG00104" "CPG00103" "CPG00109"
#> [7] "CPG00106" "CPG00100" "CPG00110" "CPG00105" "CPG00101"

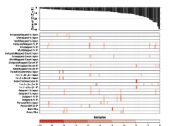


Get quality score
barplot

Get quality score
heatmap



Combine barplot and heatmap for
quality score multipanelplot



Legend

Input Data

Quality Score
Accumulation

Outlier
Detection

Data
visualisation