

Functions, signatures and biomarkers

Description:

It covers more advanced R techniques such as loops and user generated functions, and methods for handling complicated experiments with more than two groups. This includes overlap analysis, signatures and biomarkers.

It is recommended to those wishing to improve their R skills or those who are planning on exploring experiments with more than two groups of samples.

Learning objectives:

- Practical experience of writing custom R helper functions, such as a personalised heatmap function.
- Practical experience of using time saving loops in R.
- Knowledge and practical experience of handling complicated omic experiments in R, including the use of typical omic analysis such as signatures, meta-genes, biomarkers, k-means, fold vs fold and overlap.

Course outline:

Day 1 - Writing custom functions in R.

Day 2 - Optimising custom plot functions in R

Day 3 - Overlap and Fold vs Fold analysis. Heatmap rugs.

Day 4 - Differential expression signatures and k-means clusters.

Day 5 - Loops, manual stats, loading and plotting custom data, helpful packages.