iSEETheBook

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Preface

This book compiles essential knowledge about *iSEE*, an R package released through the Bioconductor project.

See Rue-Albrecht et al. (2018) for the original publication.

This book covers essential knowledge for three main groups of users:

- End users interacting with the graphical user interface in their web browser.
- Developers of scripted web-applications using iSEE to showcase data sets.
- Developers of extensions contributing new functionality and packages to the iSEE ecosystem.

1 Introduction

iSEE is a Bioconductor package designed to produce interactive web applications for the visualisation of biological assays.

Initiated with single-cell RNA-sequencing in mind (in 2017), *iSEE* was designed in such a way that it naturally handles any biological assay that can be stored in a rectangular matrix of features (in rows) and samples (in columns).

What makes *iSEE* stand out from other interactive web-application is its focus on the *SummarizedExperiment* class, a data structure is widely used throughout the Bioconductor project, from bulk to single-cell experiments.

The well-defined and stable *SummarizedExperiment* data structure makes it easy for *iSEE* to automatically detect information commonly stored in dedicated components of *SummarizedExperiment* objects and display that information in a range of interactive panels, including tables and plots.

References

Rue-Albrecht, Kevin, Federico Marini, Charlotte Soneson, and Aaron T. L. Lun. 2018. "ISEE: Interactive Summarizedexperiment Explorer." *F1000Research* 7: 741. https://doi.org/10.12688/f1000research.14966.1.