Introduction to Single-cell RNA-seq analysis

Harvard Chan Bioinformatics Core

https://tinyurl.com/hbc-intro-to-scrnaseq

Learning Objectives

✓ Describe best practices for designing a Single-cell RNA-seq experiment

✓ Describe steps in a Single-cell RNA-seq analysis workflow.

✓ Use Seurat and associated tools to perform analysis of single-cell expression data, including data filtering, QC, clustering, and marker identification

Useful Resources
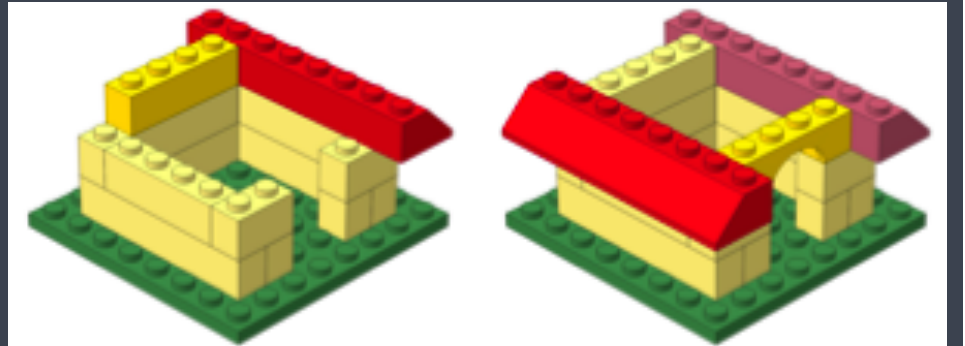
Computational packages for single-cell analysis:

http://bioconductor.org/packages/devel/workflows/html/simpleSingleCell.html

https://satijalab.org/seurat/

https://scanpy.readthedocs.io/

https://github.com/seandavi/awesome-single-cell

Online courses:

https://hemberg-lab.github.io/scRNA.seq.course/

https://github.com/SingleCellTranscriptomics

Resources for scRNA-seq Sample Prep:

https://www.protocols.io/

https://support.10xgenomics.com/single-cell-gene-expression/sample-prep

https://community.10xgenomics.com/

Survey

https://tinyurl.com/scrnaseq-exit

Bioinformatics Community Networking Breakfast!

- **Free and open** to the LMA community
- Food and seats are **first-come-first-served**
- **Last Wednesday** of every month

Date	Location
March 25th	HMS' Jeffrey Modell Center for Immunology, Room 100A
April 29th	HMS' Jeffrey Modell Center for Immunology, Room 100A
May 27th	HMS' Jeffrey Modell Center for Immunology, Room 100A
June 24th	HMS' Jeffrey Modell Center for Immunology, Room 100A

Upcoming short workshops

HBC's monthly short workshops

- Workshops on bioinformatics methods & related skills
- Once a month for 3 hours
- First-come-first-served, no registration required
- Free and open to everyone at Harvard University and its affiliates

Spring 2020 Schedule:

Topic	Date	Time	Location	Pre requisites
Introduction to R	January 15th	1 PM	HSPH Kresge G1	None
Introduction to `tidyverse` and Data Visualization with `ggplot2`	February 12th	1 PM	HSPH Kresge G1	Introduction to R
Gene Annotations and Functional Analysis of Gene Lists	March 18th	1 PM	HSPH Kresge G1	Introduction to R
Generating Data Analysis Reports with RMarkdown	April 15th	1 PM	HSPH Kresge G1	Introduction to R

Thanks!

- Sarah Boswell, HMS

- HBC members

https://tinyurl.com/r-on-O2

Contact us!

Training team ✉ *:* hbctraining@hsph.harvard.edu

Consulting ✉ *:* bioinformatics@hsph.harvard.edu

🐦 @bioinfocore