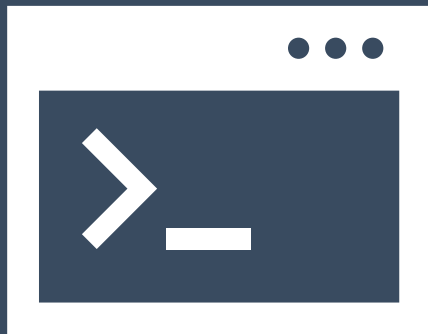


Pseudobulk and related approaches for scRNA-seq analysis

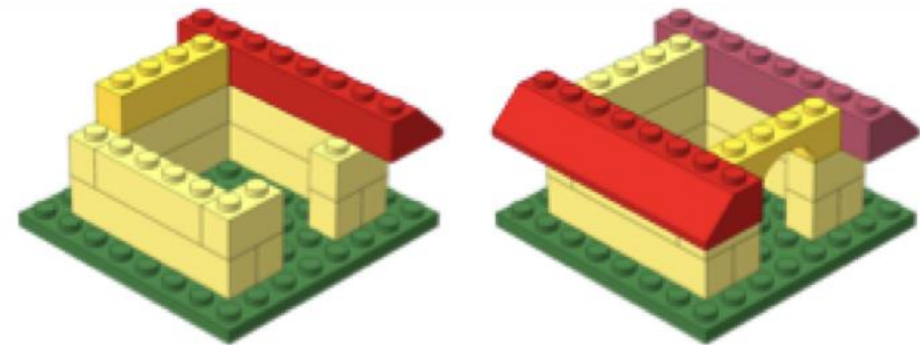
<https://tinyurl.com/hbc-pseudobulk-DGE>



Harvard Chan Bioinformatics Core



Workshop Scope



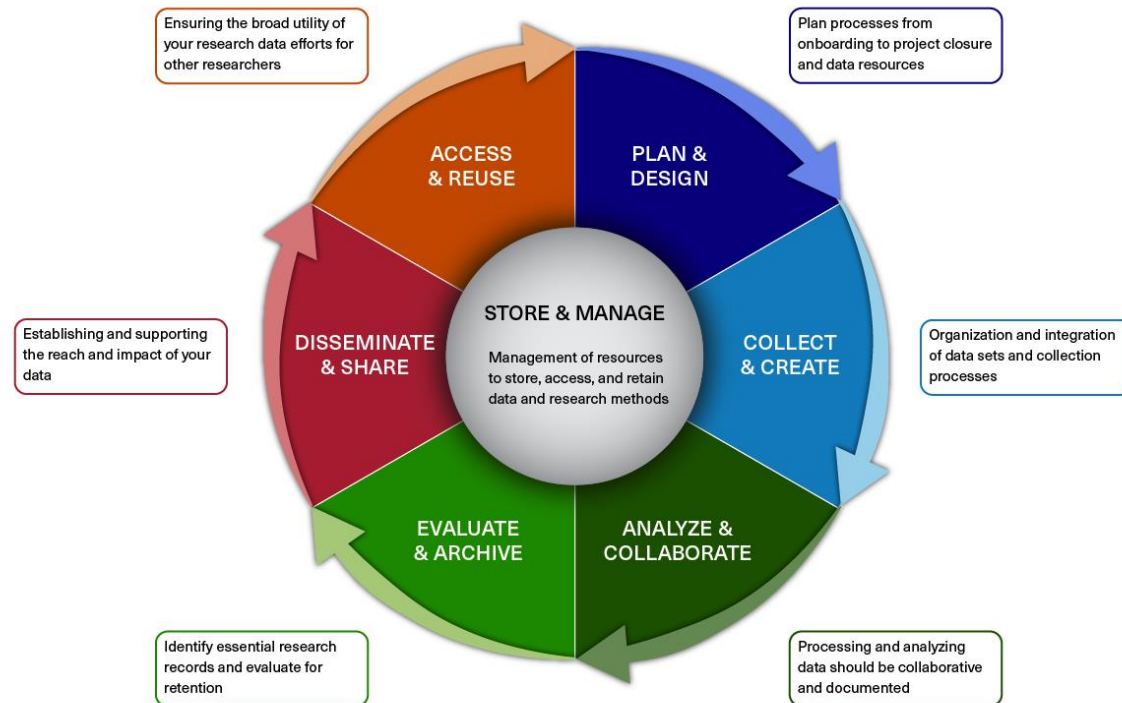
- ❖ Understanding considerations for when to use different DGE algorithms on scRNA-seq data
- ❖ Using FindMarkers to evaluate significantly DE genes
- ❖ Aggregating single cell expression data into a pseudobulk counts matrix to run a DESeq2 workflow
- ❖ Evaluating expression patterns of differentially expressed genes at the pseudobulk and single cell level
- ❖ Application of methods for evaluating differential proportions of cells between conditions

Exit survey

<https://tinyurl.com/hbc-scRNAseq-DGE-exit-survey>

Research Data Management (RDM)

BIOMEDICAL RESEARCH DATA LIFECYCLE



Better RDM practice benefits you

- ❖ **HMS Data Management LMA**

- ❖ **Webpage:** <https://datamanagement.hms.harvard.edu>


- ❖ **Sign up** for quarterly email updates

- ❖ **Harvard-wide Research data Management**

- ❖ <https://researchdatamanagement.harvard.edu/>

Spring 2025 Data Lifecycle Training

Plan & Design

February 11 


Data Management
Offboarding for
Research Projects

March 19  

A Guide to Efficient
Research Practices


March 26  

Tips and Tricks for Writing
an Actionable Data
Management Plan


May 21 

Research Data
Stewardship Basics


Collect & Analyze

January 29 


Data Literacy:
Introduction to GIS

February 19 


Foundations in R

March 19 

Reproducible Research
using RMarkdown


April 16 

An Introduction to Git
and GitHub


May 21 

Managing Conflicts
on GitHub


Store & Evaluate

March 10 

Introduction to the
General Records Schedule


April 7 

Managing Paper Records:
Off-Site Records Storage



April 21 

Managing Electronic
Records: Shared Drives
and Emails


Share & Publish

February 27 

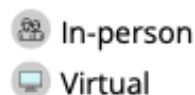
Research Management:
Open Access Publishing

April 9  

Research Management:
Closing Out Your Research

April 23 

Data Sharing with
Harvard Dataverse

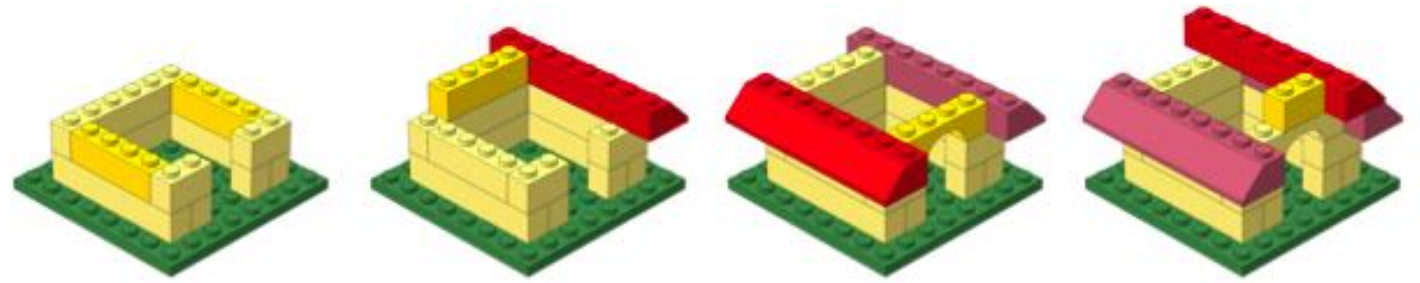


Learn More & Register
bit.ly/rdmwg-calendar



<https://datamanagement.hms.harvard.edu/about/news-events/rdmwg-calendar>

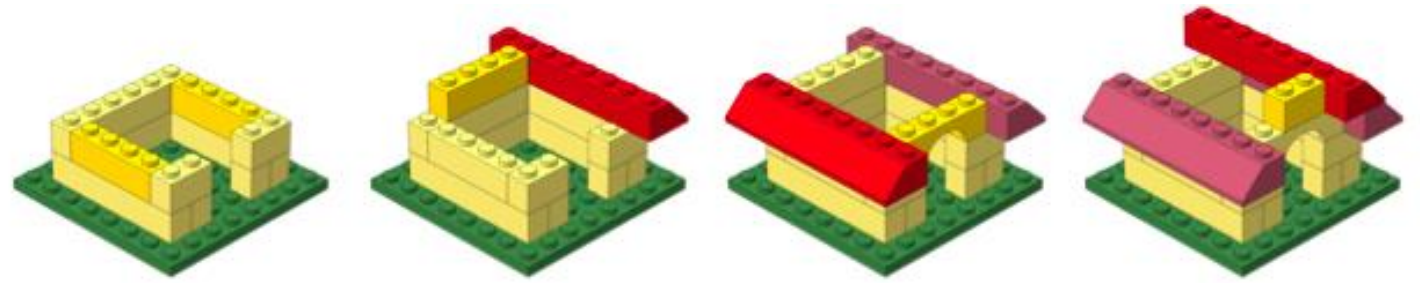
Keep building!



Topic	Category	Date	Duration	Prerequisites
Shell for Bioinformatics	Basic	April 22, 25, 29	Three 2.5h sessions	None
Investigating chromatin biology using ChIP-seq and CUT&RUN	Advanced	May 2, 6, 9	Three 2.5h sessions	Shell for Bioinformatics
Introduction to R	Basic	May 20, 23, 27, 30	Four 2h sessions	None
Peak Analysis	Advanced	June 17, 20, 24	Three 2.5h sessions	R

<https://bioinformatics.sph.harvard.edu/upcoming-workshops>

Keep building!



Topic	Pre-requisites	Date/Time	Time	Registration
"Track Changes" for Your Code: an Introduction to Git and GitHub	None	4/16/25	1 - 4 pm	Register now!
Coding with Others: Managing Conflicts on GitHub	"Track Changes" for your code: An Introduction to Git and GitHub	5/21/25	1 - 4 pm	Register now!

<https://bioinformatics.sph.harvard.edu/current-bioinformatics-topics-workshops>

Join us for HBC Community Breakfast!

- ❖ An opportunity to get to know others in the community
- ❖ Free food and beverages
- ❖ Great conversations



**Thursday May 8th, 2024
9:00 to 10:30am**

More Info:

<http://bioinformatics.sph.harvard.edu/breakfast/>

Talk to us early!

Involvement in study design to optimize experiments



More Information

- ❖ *HBC training materials: <https://hbctraining.github.io/main>*
- ❖ *HBC website: <http://bioinformatics.sph.harvard.edu>*

Contact Us

Sign up for our mailing list:

<https://tinyurl.com/hbc-training-mailing-list>

- ❖ *HBC training team:* hbctraining@hsph.harvard.edu
- ❖ *HBC consulting:* bioinformatics@hsph.harvard.edu