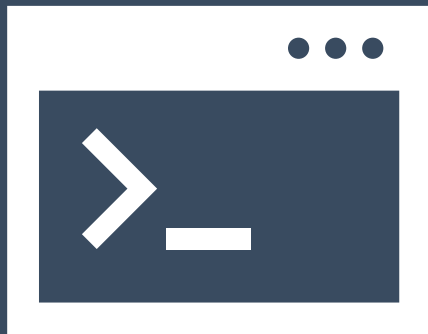


Introduction to Variant Calling

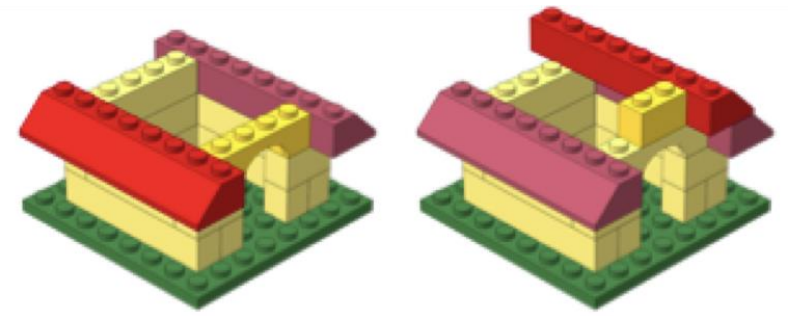
<https://tinyurl.com/Intro-to-variant-analysis>



Harvard Chan Bioinformatics Core



Learning Objectives

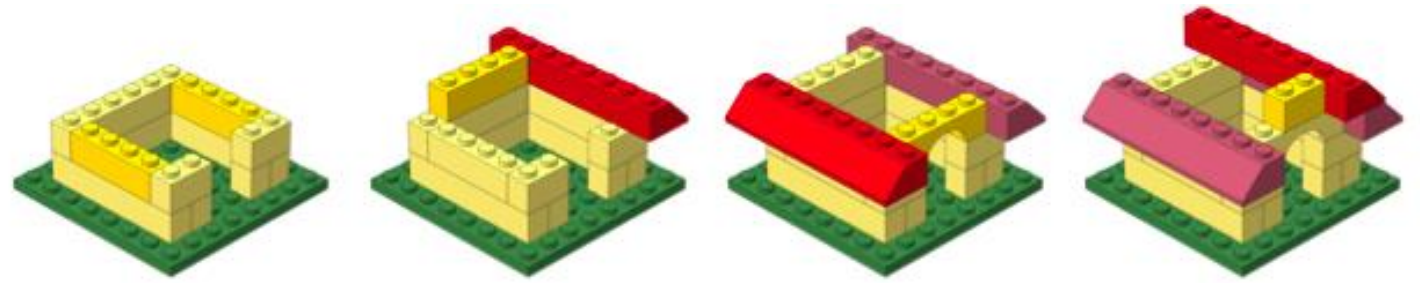


- ❖ Evaluate QC metrics for variant calling
- ❖ Call variants using GATK
- ❖ Filter variants to retain only high-quality variant calls
- ❖ Annotate variants using SnpEff and dbSNP
- ❖ Prioritize variants by their impact
- ❖ Visualize variants in IGV
- ❖ Implement cBioPortal to analyze variants

Exit survey

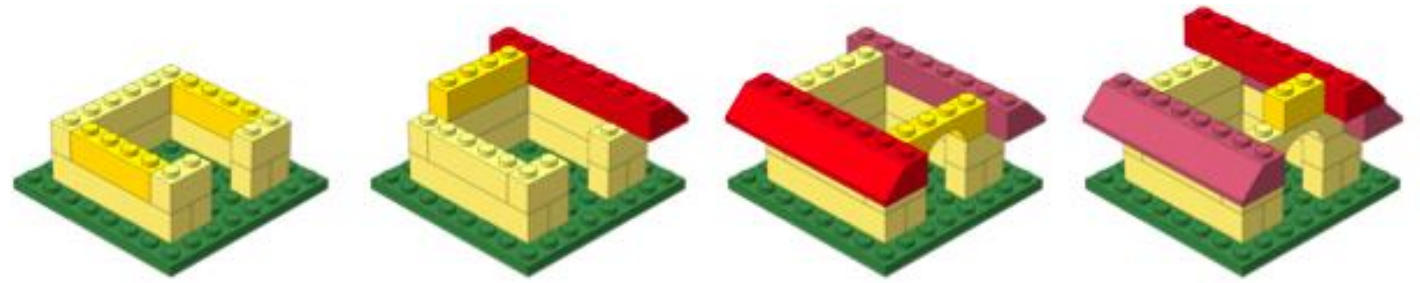
<https://tinyurl.com/hbc-varcalling-exit-survey>

Keep building!



Topic	Category	Date	Duration	Prerequisites
Introduction to R	Basic	October 8, 11, 15, 18	Four 2h sessions	None
Peak analysis	Advanced	October 25, 29, November 1	Three 2.5h sessions	R
Introduction to SingleCell RNA-seq	Advanced	November 12, 15, 19	Three 2.5h sessions	R
Pseudobulk	Advanced	December 3, 6, 10	Three 2.5h sessions	R

Keep building!



Topic	Pre-requisites	Date/Time	Time	Registration
scRNA pre-processing	R basics	10/16/24	1 – 4pm	Register!
GitHub Part I	TBD	11/20/24	1 – 4pm	Coming Soon!
GitHub Part II	TBD	12/11/24	1 – 4pm	Coming Soon!

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O2 Cluster Account

Description

What does it do?

Get an account on O2, the HMS High Performance Compute cluster

Available To

Who is eligible?

Any HMS or HMS-affiliated researcher who has an HMS eCommons account.

Cost

What does it cost?

There is no cost to labs whose PI has a primary or secondary faculty appointment in an HMS Quad department.

If the PI of your lab does not have a primary or secondary faculty appointment in an HMS Quad department, cluster usage will be charged for beginning later in 2021. Please see the following page for current details about rates: <https://it.hms.harvard.edu/rc/core/rates>.

Support

Please fill out the [online help request form](#), or email rchelp@hms.harvard.edu.

How to Access

How do I get it?

Two-factor authentication is required to request an account on O2, as well as for O2 logins once your account is created. Harvard University uses a mobile app called Duo that makes the process quick and easy. Even if you already use Duo for HarvardKey, you will still need to setup a Duo profile for HMS.

- [Setup HMS two-factor Authentication \(HMS Duo Mobile\)](#)
- [Reactivate or Reconnect HMS two-factor Authentication \(HMS Duo Mobile\)](#)

Once you have Duo set up, Click the "Get Service" link to login and complete the request form.

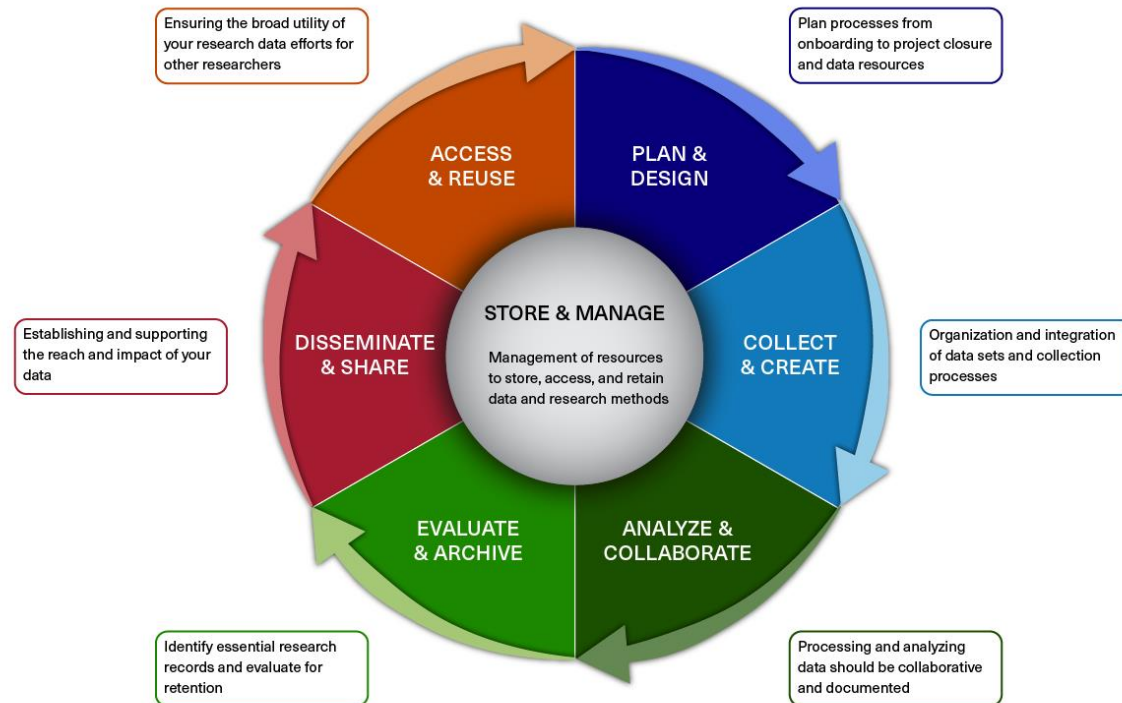
Get this service

Learn more

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Research Data Management (RDM)


BIOMEDICAL RESEARCH DATA LIFECYCLE





Fall 2024 Data Lifecycle Training

Plan & Design


September 24 
Managing Research
Data Efficiently


September 26 
Project and Lab
Onboarding


October 31 
Data Horror Stories:
Avoid the Nightmare


November 19 
Writing a Data Management
and Sharing Plan


Collect & Analyze

September 19 
Intro to MATLAB


October 10 
Research Computing:
Intro to Python


October 16 
scRNA pre-processing


November 21 
Research Computing:
Intro to O2


December 5 
RCBio: easy and quick HPC
pipeline builder & runner

Store & Evaluate


October 22 
Introduction to the
General Records Schedule


October 24 
Computing Strategies
and Resources


November 22 
Managing Paper Records:
Off-Site Records Storage

December 17 
Managing Electronic
Records: Shared Drives
and Emails


Share & Publish

September 18 
Interact with your data
using RShiny

November 14 
Principles of Finding
and Citing Data

November 20 
GitHub Part I

December 3 
Research Management:
Tools for Open Science

December 12 
Data Sharing in
Repositories



In-person



Virtual



LONGWOOD
RESEARCH DATA MANAGEMENT

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

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

- ❖ [Sign up](#) for quarterly email updates

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

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

Join us for HBC Community Breakfast!

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



More Info:

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

Thanks!

- ❖ Kathleen Chappell and Andy Bergman from HMS-RC
- ❖ Dr. Tali Mazor from DFCI
- ❖ Data Carpentry

These materials have been developed by members of the teaching team at the Harvard Chan Bioinformatics Core (HBC). These are open access materials distributed under the terms of the Creative Commons Attribution license (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

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