



Workshop on Statistics and Machine Learning in Genomics

Sponsored by the Genomics Research and Technology Hub

When: Tuesday, March 18, 2025

Time: 9:00 a.m. to 1:00 p.m. Light refreshments will be served.

Where: Sprague Hall, Room 105

Required: Personal laptop (Mac or Windows) and HPC3 account

Instructors: Jenny Wu, PhD and Ivan Chang, PhD

Registration is required: \$50 - [Register Here](#)

This workshop will introduce the applications of statistical and data science methods towards genomics including generalized linear models in count data, pathway analysis, and imaging data analysis. We will review basic concepts in statistics and machine learning, supervised and unsupervised modeling, and generative vs. discriminative approaches. A hands-on session is emphasized and will showcase how to use R and Python to perform common analysis tasks in genomics. ***Attendees are encouraged to bring their own project data for analysis and discussion.***

Agenda

8:30 – 9:00 a.m. - Light Refreshments

9:00 – 10:15 – Introduction to Statistics and machine learning in genomics (Jenny Wu, PhD)

10:15 – 11:20 – Machine learning in imaging data with Python (Ivan Chang, PhD)

11:20 – 11:40 – Break

11:40 – 1:00 – Q and A and hands on session (Jenny Wu, PhD and Ivan Chang, PhD)