Data Carpentry Genomics Syllabus

Project Organization and Management

- Data Tidiness
- Planning for NGS Projects
- Examining Data on the NCBI SRA Database

Introduction to the Command Line

- Introducing the Shell
- Navigating Files and Directories
- Working with Files and Directories
- Redirection
- Writing Scripts
- Project Organization

Data Wrangling and Processing for Genomics

- Assessing Read Quality
- Trimming and Filtering
- Variant Calling Workflow
- Automating a Variant Calling Workflow

Introduction to Cloud Computing for Genomics

- Why of Cloud Computing
- Logging onto Cloud
- Fine Tuning your Cloud Setup
- Data Roundtripping
- Which Cloud for my Data?

Setup

To participate in a Data Carpentry workshop, you will need access to the software described below. In addition, you will need an up-to-date web browser.

We maintain a list of common issues that occur during installation as a reference for instructors that may be useful on the <u>Configuration Problems and Solutions wiki page</u>.

The setup instructions for the Data Carpentry Genomics workshops can be found at the workshop overview site