
# Upcoming Training

Our fall training continues. For a full listing of our catalogue, see our website. All ACENET sessions are online through the fall.

### Cloud from A to Z

***18, 20, 25, 27 October, 1300-1600hrs Atlantic / 1330-1630hrs NL***

This is an intermediate level series. Cloud computing provides great flexibility, allowing complete control of the computing environment. In addition, the environment can be copied, backed up, created and recreated in an automated way. In these lessons, we will start you on the path towards making use of the great flexibility and power of cloud computing. We will be using the popular static website generator Jekyll. This is an in-depth workshop for those with no prior cloud experience, at the end of which you will have a virtual machine and a Jekyll website. Prerequisite: Completion of Software Carpentry's Unix Shell, or similar experience. *This workshop will have two options: An Instructor Led and Self-Study option. We recommend that should you choose the Self-Study option that you have some prior knowledge of the topics to be successful.* DETAILS & REGISTER

### Introduction to MATLAB

***1 November, 1300-1500hrs Atlantic / 1330-1530hrs NL***

Through live demonstrations and examples, learn how MATLAB can be used to visualize and analyze data, perform numerical computations, and develop algorithms. Topics will include: accessing data from many sources; using interactive tools for iterative exploration, design, and problem solving; automating and capturing your work in easy-to-write scripts and programs; and sharing your results with others by automatically creating reports. This session is designed for those new to MATLAB, or more experienced users, as it will include some tips and tricks. DETAILS & REGISTER

### Introduction to Deep Learning

***2 November, 1300-1600hrs Atlantic / 1330-1630hrs NL***

This tutorial delivered by the Acadia Institute for Data Analytics and hosted by ACENET, is a gentle hands-on introduction to developing predictive models using deep learning artificial neural networks. It provides a high-level overview of the key elements of neural networks and deep learning (BP, CNN, LSTM), along with recent advances that allow deep networks to solve challenging problems such as object recognition in images (e.g. classification of animal or letter) and sequence prediction (e.g. next word in a sentence, like Google auto-complete). Participants will build their own deep models using prepared software (Keras and Tensorflow) working in the browser. All necessary code is provided, however a basic level of Python programming experience is needed. DETAILS & REGISTER

### Using MATLAB with Python

***3 November, 1300-1500hrs Atlantic / 1330-1530hrs NL***

One of the challenges in software development is to integrate different technologies or product stacks efficiently, streamlining development and facilitating collaboration between teams. In this session we will discuss how to work together with Python and MATLAB, thus expanding the possibilities when carrying out data science projects. Highlights include: calling Python libraries directly from MATLAB; calling a live MATLAB session from Python; and, packaging MATLAB analytics as royalty-free .py libraries. DETAILS & REGISTER

### AI with MATLAB: Part 1 - Machine Learning with Signals

***8 November, 1300-1500hrs Atlantic / 1330-1530hrs NL***

Machine learning (ML) algorithms use computational methods to “learn” information directly from data without relying on a predetermined equation as a model. In this hands-on workshop, you will use MATLAB to apply ML techniques to Signal data. Topics include: fundamentals of ML (supervised learning, feature extraction, and hyperparameter tuning); building and evaluating ML models for classification and regression of signals; automatic hyperparameter tuning and feature selection to optimize model performance; and, deploying ML models. DETAILS & REGISTER

### HSS Working with Data Series: Introduction to Spreadsheets

***9 November, 1300-1600hrs Atlantic / 1330-1630hrs NL***

This is a hands-on introductory workshop focused on fostering best practices for data organization in spreadsheets. Participants will learn how to organize their data to prioritize clarity, reproducibility, and interoperability, such that they can seamlessly load their data later into an analysis program. The spreadsheet programs covered will be Microsoft Excel and Google Sheets. The examples explored will be from the field of Social Sciences, but the principles are relevant for any discipline that collects data in spreadsheets. No previous experience with spreadsheets or programming is required. DETAILS & REGISTER

## AI with MATLAB: Part 2 - Deep Learning with Signals

***10 November, 1300-1500hrs Atlantic / 1330-1530hrs NL***

In this hands-on workshop, you will learn how to apply various Deep Learning (DL) techniques to biomedical signal data using MATLAB. You will discover tools and fundamental approaches for developing advanced predictive models. We will cover the complete AI pipeline from signal exploration to AI modeling to deployment. You will write code and use MATLAB Online to: annotate time series biomedical signals automatically; apply advanced signal pre-processing techniques for feature extraction; train deep learning models using CNNs and LSTMs; and, discuss interoperability with Python frameworks. DETAILS & REGISTER

## HSS Working with Data Series: Introduction to Regular Expressions

***16 November, 1300-1600hrs Atlantic / 1330-1630hrs NL***

This is an introductory lesson adapted from the Library Carpentry workshop on Introduction to working with Data that introduces people with library- and information-related roles, or those in the Humanities and Social Sciences professions that work with data, to using regular expressions. Regular expressions are a concept and an implementation used in many different programming environments for sophisticated pattern matching. They are an incredibly powerful tool that can amplify your capacity to find, manage, and transform data and files. The lesson provides background on the regular expression language and how it can be used to match and extract text and to clean data. No previous experience with programming is required. DETAILS & REGISTER

## Using Git Tools to Manage File Changes and Collaborate: Version Control

***17 November, 1200-1600hrs Atlantic / 1230-1630hrs NL***

Version control is the practice of managing and sharing changes to documents, programming code, websites or any other files to keep track of what's been changed, by whom, when and why. All previous versions of files are saved and you can even revert to a previous version. Git-portal sites, like GitHub or GitLab, offer many useful features to facilitate collaborative development. In this beginner level session, we will show you how to create a repository, record changes to files, explore and restore from the recorded history and how to resolve conflicts (when one member overwrites another's changes). DETAILS & REGISTER

## HSS Working with Data Series: OpenRefine

***23 November, 1300-1600hrs Atlantic / 1330-1630hrs NL***

This Library Carpentry adapted lesson introduces people working in Humanities, Social Sciences, and library- and information-related roles to working with data in OpenRefine. OpenRefine can be used to standardize and clean data across your file, and is most useful when working with a comma separated values file (csv) or a tab delimited file (tsv). It can help you get an overview of a data set; resolve inconsistencies in a data set; help you split data up into more granular parts; and more. At the conclusion of the lesson you will understand what the OpenRefine software does and how to use the OpenRefine software to work with data files. This lesson will be co-facilitated by an academic librarian who will give real life examples of using OpenRefine in their work. No previous experience with the software is required. DETAILS & REGISTER

## Using Git Tools to Manage File Changes and Collaborate: Collaboration Platforms

***24 November, 1200-1600hrs Atlantic / 1230-1630hrs NL***

This session will focus on collaborative development workflows using Git-collaboration sites like GitHub, GitLab or Bitbucket and will demonstrate how to work with branches, issue tracking, contribute to projects using pull-/merge-requests, code-review, how to run CI/CD-pipelines and use other common features of these platforms. Prerequisite: basic experience using Git or participation in the 17 November workshop. DETAILS & REGISTER

## HSS Working with Data Series: Introduction to Research Data Management

***30 November, 1300-1600hrs Atlantic / 1330-1630hrs NL***

This is an introductory workshop to research data management for Humanists and Social Scientists. The Tri-Agencies, including the Social Sciences and Humanities Research Council (SSHRC), require that researchers make their data openly available to the public. What does this mean for Humanists and Social Scientists that don't work with traditional "data" and instead work with humans, books, or art? The session will focus on the importance of data management planning. Specifically, we will cover the tools and services available to Atlantic Canadian researchers that can help you better manage your data, enhance the discoverability of your research, and ensure that your valuable research data are preserved for future reuse. Special attention will also be given to managing sensitive data, including FRDR's Sensitive Data Pilot Project. This session will be co-facilitated by a data librarian to foster a discussion of the role of research data management in the Humanities and Social Sciences. DETAILS & REGISTER

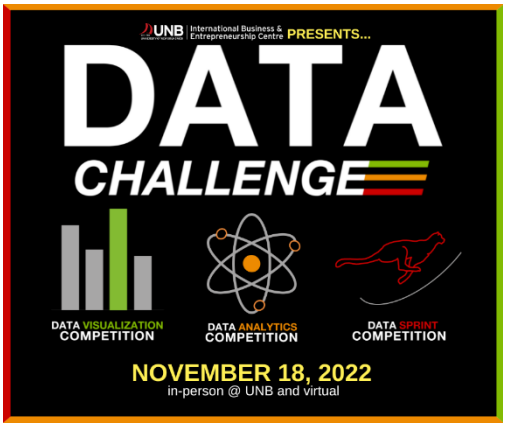
## ACENET and MGF: Introduction to Genomics Data Organization & Analysis

***13, 14, 15, 16 December, 1200-1600hrs Atlantic / 1230-1630hrs NL***

This is a beginner level workshop series that is hands-on, covering the fundamentals of Unix command line and basic genomic skills for short read sequence data. Participants will learn how to do quality assessment, read trimming and filtering, data management, and task automation on the high performance computing infrastructure resources from the Digital Research Alliance of Canada (formerly Compute Canada). Participants will be encouraged to help one another and to apply what they have learned to their own research problems. The workshop will cover a variant calling pipeline and participants will learn skills that will be broadly applicable to other genomics tasks. DETAILS & REGISTER

## From Our Partners

More training sessions can be viewed from our partners at Calcul Québec, Compute Ontario, and for research data management, the Digital Research Alliance of Canada.




# UNB Data Challenge

The UNB International Business & Entrepreneurship Centre is excited to announce that we will be hosting a UNB Data Challenge this year, on November 18th, 2022 in a hybrid format – in person at our Wu Conference Centre, and online via MS Teams. The Data Challenge brings together three competitive events:

**Open Data Visualization (7th annual)**
Assess and analyze data related to one of the 17 goals of the 2030 Agenda for Sustainable Development and present to an audience to communicate a recommendation, story, or new idea.

**Data Analytics (3rd Edition)**
Put your analytical skills to the test and present insights to an audience. Teams must choose one of the data sets provided (available in October). What insights are you able to discover? How well can you separate the useful information from the "noise"? What outcomes are you able to predict? What are your recommendations?

**Data Sprint (3rd Edition)**
This fun hackathon-style competition will put your data skills to the test in a time-tied scenario. There is little preparation required as the data set will be provided on Nov 11, 2022,

one week ahead of the event date. Can you tackle a data set with speed, accuracy, and creativity?

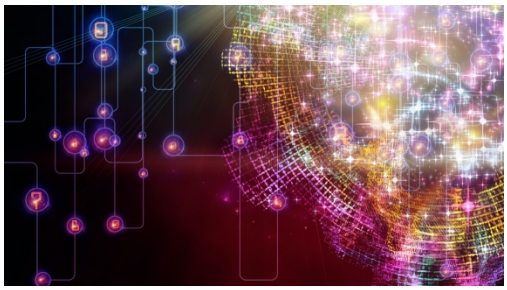
Open to students and non-students, the Data Challenge is ideal for telling a story with data, meeting leaders in academia, government, and private organizations, and exploring data science.

In addition to insightful panel discussions, networking opportunities, and workshops, there is also nearly $10,000 in cash prizes!

To register, or for more information, please visit the website.

## Institutional RDM Strategy Panel Discussion Series

The Alliance invites you to a series of panel discussions on institutional research data management (RDM) strategy development. Discussions will focus on the three active stages — initiating, planning and drafting — to help post-secondary institutions and research hospitals that are eligible to administer Tri-Agency funds meet the March 2023 deadline for developing institutional RDM strategies. The first panel, entitled "Starting to Develop Your Institutional RDM Strategy" took place September 23rd.



**Panel 2: Working Through the Planning Stage of Developing an Institutional RDM Strategy**
*21 October, 1300-1400hrs Atlantic / 1330-1430hrs NL*
This panel discussion will be led by representatives of institutions that have gone through the planning stage of developing an institutional RDM strategy, which includes envisioning the future state of RDM and creating a roadmap or action plan. DETAILS

**Panel 3: Working Through the Drafting Stage of Developing an Institutional RDM Strategy**
*4 November, 1300-1400hrs Atlantic / 1330-1430hrs NL*

This panel discussion will be led by representatives of institutions that have gone through the execution stage of developing an institutional RDM strategy, which includes creating a draft strategy document and articulating the institutional path forward through a roadmap or action plan.  DETAILS

Simultaneous interpretation in English and French will be available during each session. Participants are invited to use the official language of their choice. These sessions will be recorded and posted on the Alliance's YouTube channel for those who are unable to attend live.

## ACENET Research Consultants Available

We'd just like to take a moment to remind you that our staff remain available to help you when you have questions, need some guidance, or have a particularly difficult problem you're trying to solve.

We are available to meet you in-person or virtually. Just email your local representative to set up a time, or contact support@ace-net.ca.  You can find your local representative here.

## We're Hiring!

We're looking for a Research Consultant based at the University of Prince Edward

Island. This position: provides support and consulting expertise in advanced computing to our users, new and experienced alike; develops and delivers training workshops, seminars and information sessions around advanced computing technologies, approaches, and methodologies; and maintains relationships with research groups to ensure ACENET is meeting their current needs and is preparing for their future ones. Learn about working with us on our careers page. If this opportunity sounds interesting to you, email careers@ace-net.ca.

## Resource Allocation Competition 2023

The Resource Allocation Competition (RAC) enables faculty members and their research groups to access compute, storage and cloud resources beyond the normal allocations. These competitions are open to researchers from all disciplines based at Canadian academic institutions who are eligible to apply for funding from the federal granting agencies.

RAC 2023 launched on September 22nd, 2022. To learn more about this year's competitions, please visit the Alliance website.

As always, ACENET staff are happy to assist you with questions or your RAC submissions. Just contact your local ACENET consultant, or email support@ace-net.ca.

## Career Opportunities with NBIF/FNIB

**Director of Research / Directeur ou Directrice de la Recherche**
Reporting to the CEO, the Director of Research leads the New Brunswick Innovation Foundation's (NBIF) ever-growing portfolio of research investments, managing its various funding programs in support of applied research and talent development, managing and developing its research team, and realizing sustainable results and outcomes.
More information
Directeur ou Directrice de la Recherche