# **XNAT Workshop**



Welcome to the Online XNAT Workshop. Completing this online training is an acceptable substitute for the in-person XNAT Workshop. By watching all the workshop videos below and completing the associated quiz you will have completed the mandatory training component for enabling your user account. XNAT administrators will automatically be notified when you have completed the quiz.

The workshop videos can be viewed at your own speed and the quiz can be taken after the completion of all videos.

By the end of this tutorial you should know how to navigate XNAT, the XNAT data model, how to upload and download data, the user permission roles, proper naming convention, how to set up pre-processing scripts.

If you would like to know more about XNAT beyond the scope of this tutorial, you can check out the official XNAT documentation here.

#### **Resources:**

- Get the course slides: Here
- Start the Quiz: Here
- Need Help? Contact: xnat.neuro@camh.ca

A IMPORTANT NOTE: the following videos reference neurowiki.camh.ca as a resource for information on naming convention and xnat procedures. The neurowiki is now deprecated. All information that was found on neurowiki can now be found here on confluence by searching in the left panel.

### **Course Outline**

- 1 Course Introduction
- 2 Neuroinformatics Platform Overview
- 3 Getting Started with the Neuroinformatics Platform
- 4 Introduction to XNAT
- 5 Working with MR/PET Data
- 6 Working with EEG Data
- 7 Pipelines
  - 7.1 Standard Pipelines
    - 7.2 Optional Pipelines
      - 7.2.1 MR Protocol QC
      - 7.2.2 Dicom to Nifti Conversion
      - 7.2.3 EEG Pre-Process
      - 7.2.4 EEG Protocol QC
    - 7.3 Pipeline Next Steps
- 8 Take the Quiz
- 9 Congratulations!
- 3 Congratulations

### **Course Introduction**

#### Link to Course Introduction video

### What you'll learn:

- Workshop Requirements
- Course Rubric

## **Neuroinformatics Platform Overview**

Link to Neuroinformatics Platform Overview video

What you'll learn:

- What is XNAT
- What is the Neuroinformatics Platform

## **Getting Started with the Neuroinformatics Platform**

#### Link to Neuroinformatics Platform Overview video

What you'll learn:

- · How to get started with the Neuroinformatics Platform
- How to create a New User Account
- How to create a New Project
- XNAT permission model
- How to share data between Projects
- The Neuroinformatics Platform Naming Convention

Resources:

- New User Request Form
- New Project Request Form

## Introduction to XNAT

Link to Introduction to XNAT video

What you'll learn:

- The XNAT Data Model
- Navigating XNAT
- Archive vs. Prearchive
- Viewing data
- Moidifying data

## Working with MR/PET Data

#### Link to Working with MR/PET Data video

What you'll learn:

- Uploading data manually
- · How to setup automated uploads
- Anonymization
- Downloading data

## Working with EEG Data

Link to Working with EEG Data video

What you'll learn:

- Uploading data manually
- How to setup automated uploads
- Downloading data

## **Pipelines**

### **Standard Pipelines**

These pipelines will run on your data without any additional configuration steps. Raw data will not be altered and is still available.

Link to Standard Pipelines video What you'll learn:

- · Pipelines that will run automatically on your data:
  - Name Checker (All data)

  - fBIRN QC (Only fMRI)
    Manual QC (Optional, only MR)

### **Optional Pipelines**

The following pipelines must be configured before they will run. The Next 4 subsections are optional learning (not mandatory for the quiz) but are recommended. If you only want to learn the absolute minimum for the quiz, you can jump ahead to this section Pipeline Next Steps

#### **MR Protocol QC**

### Link to MR Protocol QC video

What you'll learn:

· How to configure MR Protocol QC

#### Resources:

- Download example schematron
- Link to schematron standard

### **Dicom to Nifti Conversion**

#### Link to dcm2niix video

What you'll learn:

· How to configure dicom to nifti conversion

#### Resources:

• Link to description of Rordenlab's dcm2niix script

#### **EEG Pre-Process**

#### Link to EEG Pre-Process video

What you'll learn:

• How to configure EEG pre-processing conversion

#### Resources:

- Link to Redcap Pipeline Configuration form
- · Link to description of MNE python package used to pre-process the data

#### **EEG Protocol QC**

#### Link to EEG Protocol QC video

#### What you'll learn:

How to configure EEG Protocol QC pipeline

Resources:

• Link to Redcap Pipeline Config form

### **Pipeline Next Steps**

Link to Pipeline Next Steps video

What you'll learn:

- How to request new pipelinesAdditional upcoming XNAT pipelines and features

# **Spotfire Introduction**

Link to Spotfire Introduction video

What you'll learn:

- What is Spotfire
- How can it be used for your project

### Take the Quiz

Now that you've completed all the video tutorials take the quiz!

• Take the Quizz

# **Congratulations!**

You've completed the XNAT online workshop. You can now create a Neuroinformatics Platform user account and project.

#### Contact:

• xnat.neuro@camh.ca