Introduction to Encoding/Decoding Analysis using Eelbrain

Tutorial for CNSP workshop 18-20 July 2022

https://cnspworkshop.net/

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Installing Eelbrain and running the tutorial

The easiest method is to install Eelbrain and all dependencies inside a python virtual environment. Complete steps 1-6 before the tutorial, in order to save time.

1. Download and install Anaconda https://docs.anaconda.com/anaconda/install/

2. Open a Terminal or Anaconda Prompt
   https://docs.anaconda.com/anaconda/user-guide/getting-started/#write-a-python-program-using-anaconda-prompt-or-terminal

3. Change current directory to this folder
   ```
   $ cd path_to_eelbrain_tutorial_folder
   ```

4. Run the following command to create a new virtual environment and install eelbrain

   For Windows
   ```
    $ conda env create --file=env-cnsp-windows.yml
   ```
   For MacOS and Linux
   ```
    $ conda env create --file=env-cnsp.yml
   ```

   Conda will use the yml file to download and install all the required packages into a new environment named eelbrain-cnsp
   Note: This could take several minutes

5. Activate the environment
   ```
   $ conda activate eelbrain-cnsp
   ```

6. Launch Jupyter lab in the browser
   ```
   $ jupyter lab
   ```

7. Open cnsp_tutorial_eelbrain.ipynb (found on the left hand panel of the jupyter lab tab)

8. Go through the tutorial by running each code cell in sequence
   Press Shift + Enter to run a code cell in the Jupyter notebook
   Note: Several code cells may take time to run (e.g., TRF computations). These cells can be skipped and pre-computed results loaded using subsequent cells (instructions are provided in comments of each cell)

This tutorial will use the LalorNatSpeech dataset, which should be downloaded from the CNSP website and placed inside the 'datasets' folder.