Visual Studio Code: System Installer x64 [v1.87.1]

→ Python Extension [v2024.2.1]

Arduino IDE [v2.3.2]

OpenBCI GUI [v5.2.2]

Cyton Dongle Drivers [v.2.12.36.4]

liblsl [v1.16.2]

LabRecorder [v1.16.4]

Git [v2.44.0]

OpenBCI\_LSL

Miniconda 3 [Conda v24.1.2 Python v3.12.1]

(Add to GLOBAL PATH variable -> Answer 2 by Tobi Obeck: https://stackoverflow.com/questions/47914980/how-to-access-anaconda-command-prompt-in-windows-10-64-bit)

(Maybe ‘conda update conda’ and ‘conda init’ were important to be run from the conda prompt)

Create conda env: ‘$ conda create --name openbci’

Install Brainflow SDK: ‘$ python -m pip install brainflow’

Install Pandas: ‘$ pip install pandas’

Downgrade to Python3.11 for PsychoPy installation: ‘$ conda install python=3.11’ (errors otherwise)

Install PsychoPy: ‘$ pip install psychopy’

Install pylsl: ‘$ pip install pylsl’

Install stream\_viewer: ‘$ pip install git+https://github.com/intheon/stream\_viewer.git’

Downgrade pandas: ‘$ pip install pandas==1.5.\*’

(Necessary bcs: https://github.com/intheon/stream\_viewer/issues/3)

Install MNE: ‘$ pip install mne’

Install MNELAB: ‘$ pip install mnelab’

[ERROR: pip's dependency resolver does not currently take into account all the packages that are installed. This behaviour is the source of the following dependency conflicts. psychopy 2023.1.3 requires numpy<1.24.0, but you have numpy 1.26.4 which is incompatible.]

Install lower Numpy version: ‘pip install numpy==1.23.\*’

[ERROR: pip's dependency resolver does not currently take into account all the packages that are installed. This behaviour is the source of the following dependency conflicts. mnelab 0.9.0 requires numpy>=1.25.0, but you have numpy 1.23.5 which is incompatible. ]

Install pyxdf: ‘$ pip install pyxdf

conda environment ‘openbci’ is where everything works: ‘$ conda activate openbci’

(PS: renamed it to ‘nfb’ in one of the repo’s)

Run via terminal:

To run stream viewer:

$ conda activate openbci

$ stream\_viewer

To run OpenBCI\_LSL streamer:

$ cd C:\nfb\software\OpenBCI\_LSL

$ python openbci\_lsl.py COM5 --stream (for more options look at GitHub)

Run via Desktop Shortcuts:

Create desktop shortcut for stream viewer:

1) Right click on Desktop > New > Shortcut

2) In "Type the location of the item" field, enter: C:\Users\geigerm\.conda\envs\openbci\python.exe "C:\Users\geigerm\.conda\envs\openbci\Lib\site-packages\stream\_viewer\applications\main.py"

3) Enter name: “Stream Viewer”

Create desktop shortcut for openbci\_to\_LSL\_streamer:

1) Right click on Desktop > New > Shortcut

2) In "Type the location of the item" field, enter: C:\Users\geigerm\.conda\envs\openbci\python.exe C:\nfb\software\OpenBCI\_LSL\openbci\_lsl.py --stream

(wouldn’t even require the openbci conda env)

3) Enter name: “OpenBCI\_LSL”

Create shortcut for OpenBCI\_LSL:

2) C:\Users\geigerm\.conda\envs\openbci\python.exe C:\nfb\software\OpenBCI\_LSL\openbci\_lsl.py

Config

Change Lab Recorder default config:

Go to: C:\nfb\software\App-LabRecorder

Open LabRecorder.cfg

Change StudyRoot

Arduino Nano setup:

Laptop hotspot: Windows **Settings**  > **Network & Internet** > **Mobile hotspot** > Turn hotspot ON

Choose 2.4 GHz band (for compatibility with Arduino)