

# COGNITIVE NEUROSCIENCE

---

CLASS 2

**UCLOUD & MNE**

Name round :-)

# Plan for today

---

## Everyone

- Introduction to UCloud
- How to create branches and resolve merge conflicts

## In study groups

- Create a repository
- MNE tasks on UCloud
- Hand-in your results on Brightspace

# Tasks

---

## 1. Create a Cognitive Neuroscience GitHub repository for your study group

- *Optional*: create your own individual branches
- *Hint*: you can use the command

**git checkout *branch\_name***

to switch branches from the terminal

# UCloud Tasks

---

1. Create a new run with the Python Coder app on UCloud
2. Clone your Git repository in the new run
3. Get MNE up and running by executing the following command in the terminal

```
pip install mne[data]
```

# MNE Tasks

---

1. Create a notebook for the tasks
2. Load some sample data and plot the raw sensor traces

- *Hint*: look here

[https://mne.tools/dev/auto\\_tutorials/intro/10\\_overview.html#sphinx-ghr-auto-tutorials-intro-10-overview-py](https://mne.tools/dev/auto_tutorials/intro/10_overview.html#sphinx-ghr-auto-tutorials-intro-10-overview-py)

under *Loading data*

# MNE Tasks

---

- *Optional*: play around with the different arguments in the plot, for example:
  1. Change the color of the traces
  2. Plot only 10 channels
  3. Plot only a 5 second time window

# MNE Tasks

---

- *Optional*: play around with the different arguments in the power spectral density (PSD) plot, for example:
  1. Plot the PSD averaged over all the channels
  2. Plot the PSD for only the EEG channels
  3. Plot the PSD for a specific time window



# GitHub Tasks

---

- *Optional*: create and solve a merge conflict
  - Create small but different changes in the same file on your own branch and the main branch
  - Try to pull from the main branch onto your own branch

# Tasks

---

## 1. Stage, commit and push changes to your repository

- You will need an access token to push from UCloud

<https://docs.github.com/en/authentication/keeping-your-account-and-data-secure/creating-a-personal-access-token>

- Select all for *repo* and *user* scopes
- Save the token somewhere!

# Tasks

---

1. Hand-in the results in the *UCloud* & *MNE*-assignment on Brightspace
  - A link to your repository
  - A plot (or two ;-))

