Neural Data Science 2023

First Tutorial

21.04.2023

Jonas Beck, Ziwei Huang, Rita González Márquez

Admin

Who?

- Jonas Beck: *jonas.beck@uni-tuebingen.de*
- Rita González Márquez: *rita.gonzalez-marquez@uni-tuebingen.de*
- (Ziwei Huang: ziwei.huang@uni-*tuebingen.de)*

Where?

- Tutorials are all over the place this year (see ILIAS) so make sure to check before each session.

When?

- Fri, 12:15-13:45, (except for 02.06., 09.06.).

What?

- Exercises are given out after the lecture (Wed). Then there will be an open coding session in the tutorial (Fri) and the exercise will be due the following (Wed) before the lecture.
- There will be a total of 8 exercises and 1 project that should be worked on in pairs.
- You can achieve a total of 85 points (usually 10 per exercise)

Format

- small research primer from members of our lab.
    > overview of advanced methods and applications

- collaborative coding session
    > time for you to work on your exercises or projects, ask questions and clarify potential ambiguities or intended solution
    > time for you to ask questions about past exercises and grading

- There will be 8 tutorials dedicated to the exercises, with a 2 week break in-between, before we'll hand out the final projects, which you can work on in the remaining tutorials

Format

- exercises / coding labs
    > notebooks with instructions and code snippets for you to fill in
    > data and required packages will be provided with the notebooks
    > grading will be done per task
    > ~60% of final grade
    > 1 week

- final project
    > research question(s) + some data
    > notebook documenting your process (code + text + plots)
    > conclusion
    > ~40% of the final grade
    > 4 weeks

Grading

- Exercises will be graded based primarily on results.
  > *“If the plots look like the ones provided as orientation, then you’ll most likely get full marks.”*
  > If you make your code readable you can also obtain partial points for almost correct solutions.

- We’ll try to give feedback with our grading

- The stuff that earns you points is clearly marked in the notebooks

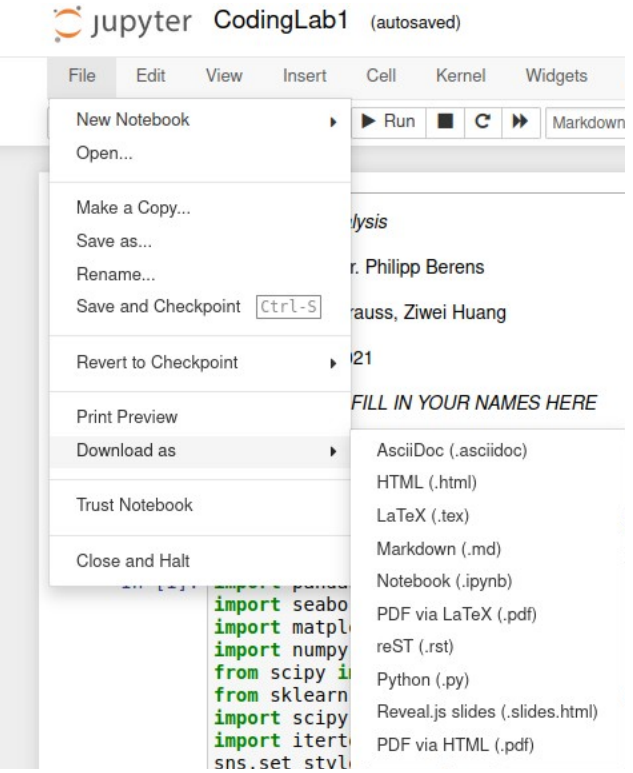
- Make sure to format your plots correctly! (We’ll provide plot scaffolding in the 1st exercise for reference)

Exercise/Project Guidelines

- Please make your code readable
  > comments, docstrings, proper formatting PEP8, black etc.
- If results are wrong and you want points on parts of your code than it is in your interest to make it readable.
- Hand in solutions as pdf **and** notebook on ILIAS
  > don’t forget to add your names to the notebook and use correct file name format.
- Make sure your notebook runs (in one pass!)

Exercise/Project Guidelines

- Download as pdf in notebook.
- If this does not work, print it [Ctrl+p] from your browser and select “save as pdf” as the printer.



What we expect from you

- That you hand in the exercises on time.
    > Should you, because of some exceptional circumstances, not be able to hand in your exercise on time, please contact us,. We will try to work something out.

- We encourage you to make use of the collaborative coding sessions to ask questions and work on your exercises / practical.
    > Questions we get via ILIAS or the forum should be the exception.

What can you expect from us

- We will grade your exercises before the tutorial.
- An open ear for any questions, problems criticisms.
  > Don’t hesitate to get in touch with us in/after the tutorial, via email or on ILIAS
- Learn how to analyze different kinds of neural data in practice.
- Get an overview of current research in (neural / medical) data science

Your feedback during the course is greatly appreciated, if you don’t like something, feel free to suggest improvements.

Questions?