

Brain Imaging Data Structure (BIDS) tutorial

StratNeuro Retreat 2024 -
Exclusive day for PhD students

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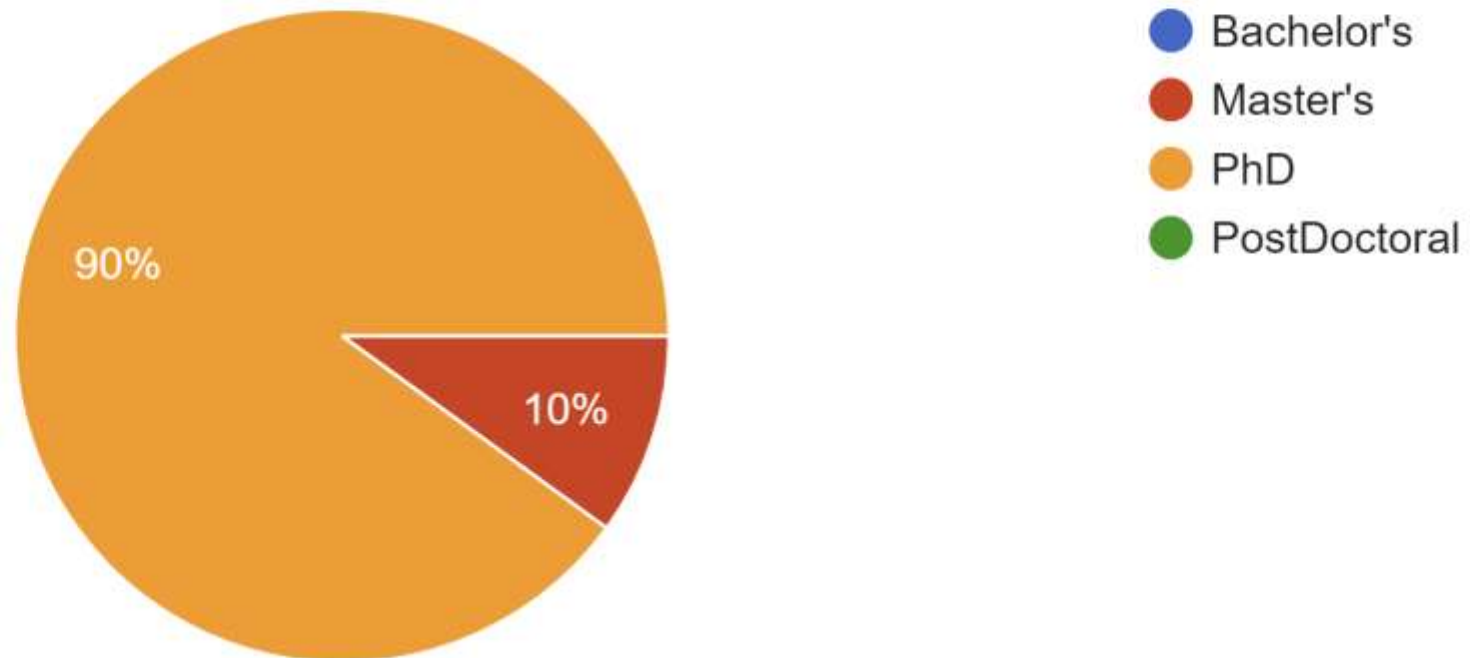
KØBENHAVNS UNIVERSITET



Background Survey

What is your current level of study? (please specify)

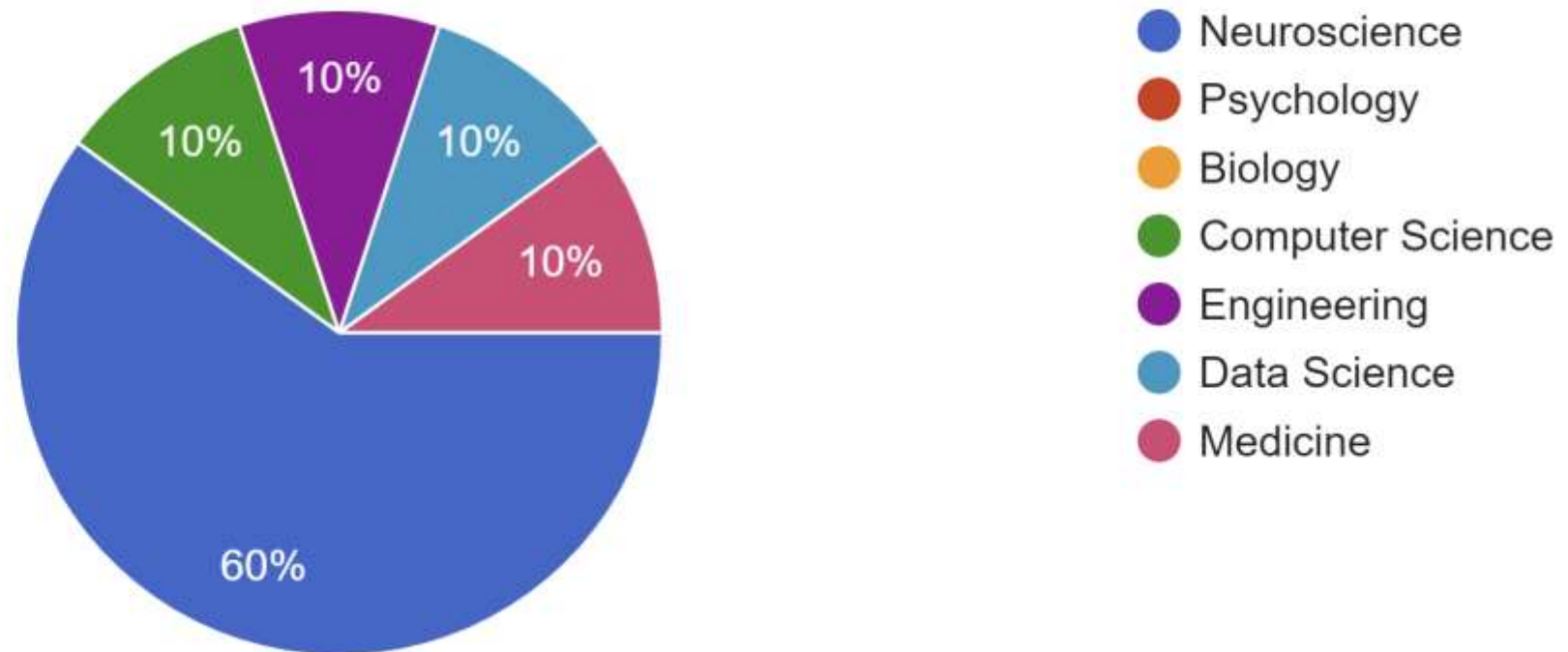
10 responses



Background Survey

What is your major or primary field of study? (please specify)

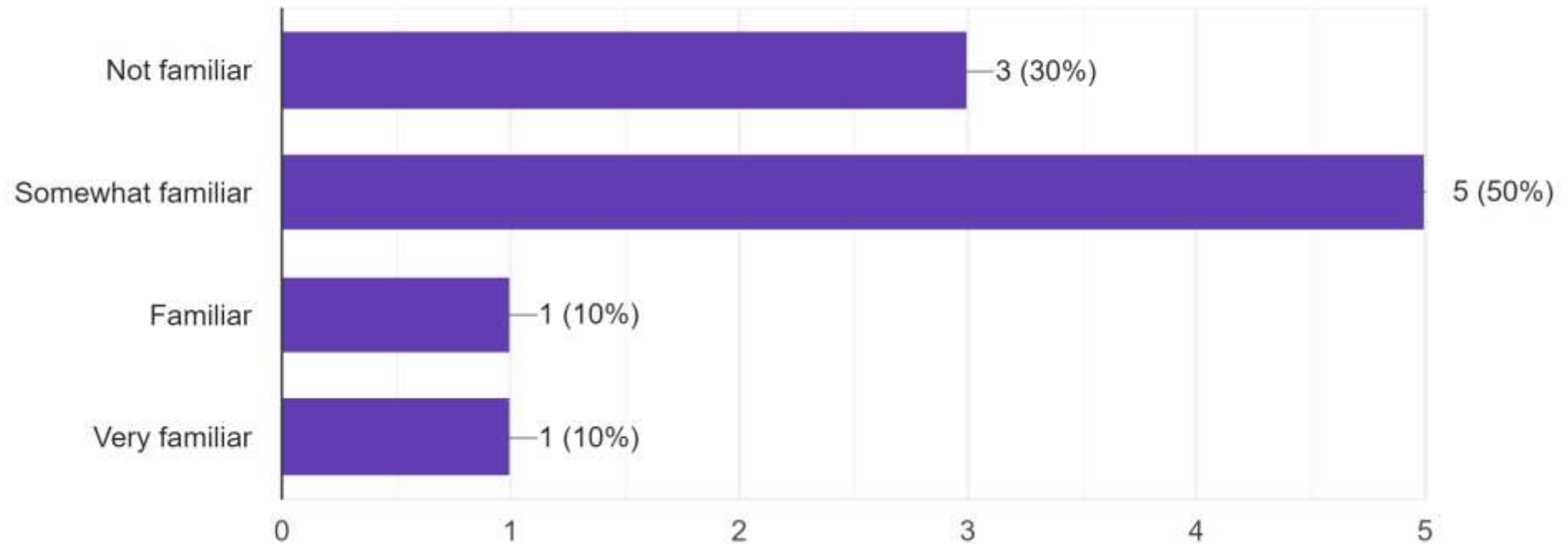
10 responses



Background Survey

How familiar are you with brain imaging techniques?

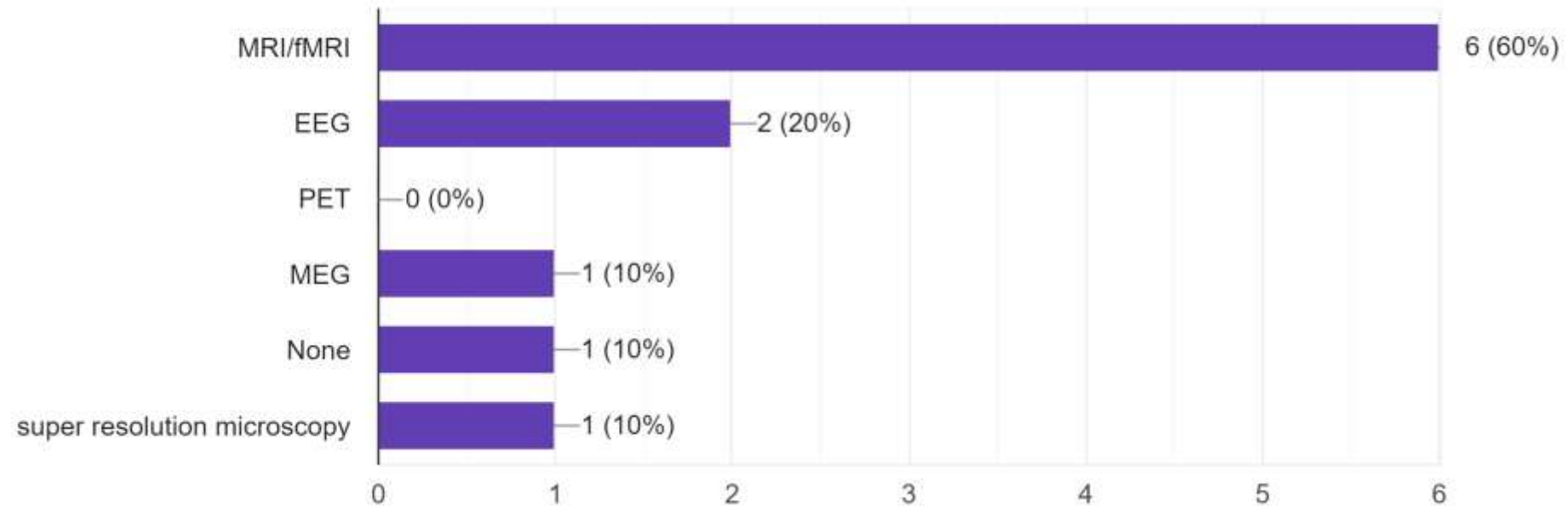
10 responses



Background Survey

Which brain imaging techniques have you used in your research or studies? (Select all that apply)

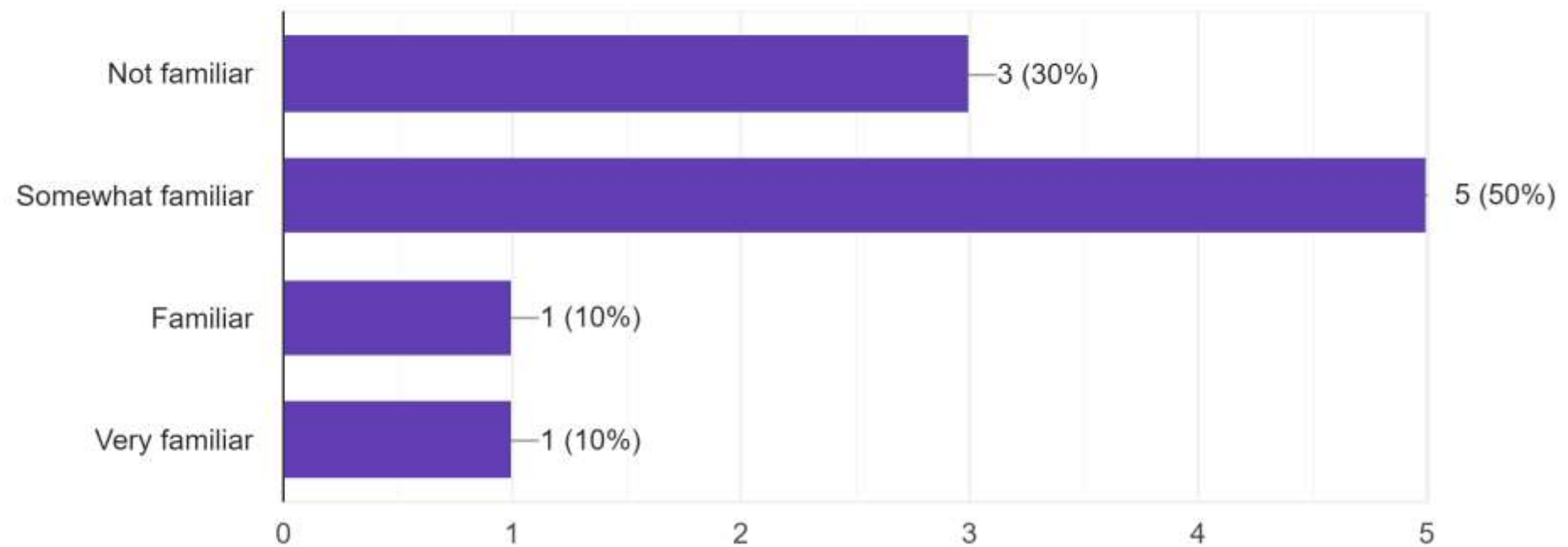
10 responses



Background Survey

How familiar are you with data organization and management in research?

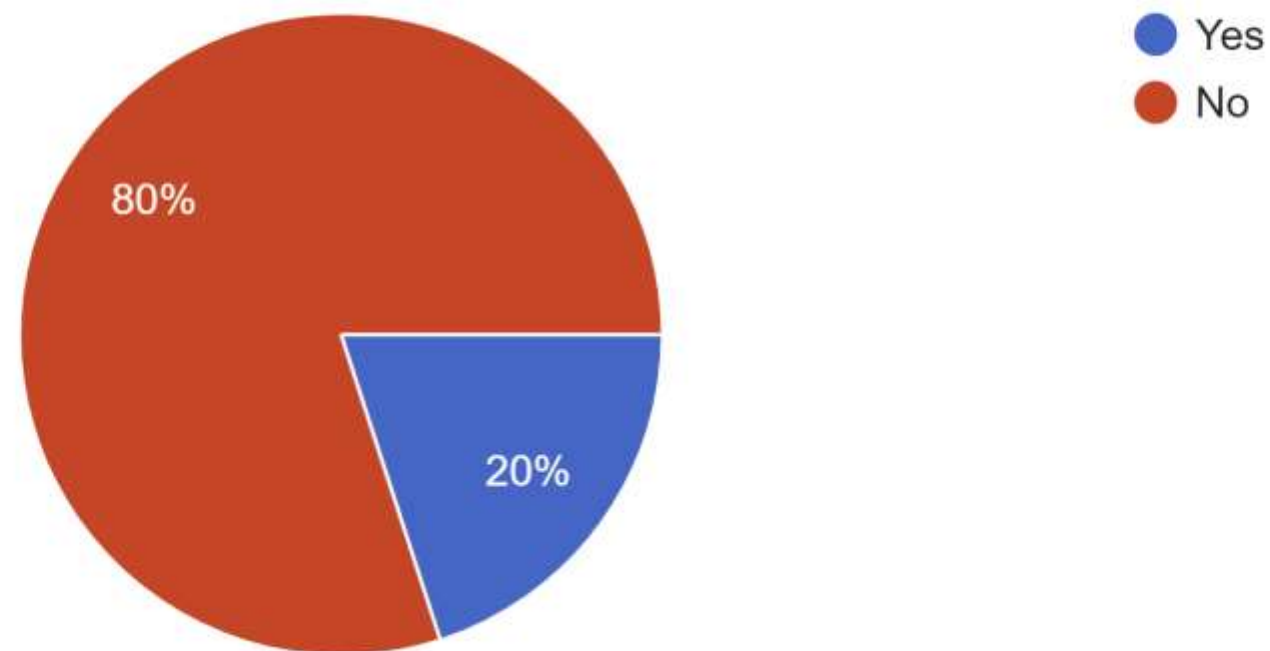
10 responses



Background Survey

Have you previously used the Brain Imaging Data Structure (BIDS) format in your work?

10 responses



What do you hope to learn from the tutorial?

- How to structure MRI data in a good way/ How to improve data structuring / Learn a method to organize data that I can apply in future PostDoc positions (even if different field from mine now)
- I expect to get started with BIDS since I do not have previous experience and I might need it in the future / To learn how to work with BIDS
- Apply BIDS for PET with focus on specificity of PET metadata & Learn more on MRI and MEG BIDS
- "I'm interested in multimodal method, and one of the modality I wish to use in the future is brain imaging. I have interacted with EEG data before but not PET or other imaging data. So I wish to learn the basic of dealing with brain imaging and the analyse techniques."

Do you have any specific questions or topics?

- What is the optimal way to structure repeat scans for the same individual(s)?
 - Basic intro and example data
- How BIDS can be useful in machine learning applications if applicable
 - Processing streams & standardizing input data

Additional comments

- "I would like to have demo PET data and metadata needed for BIDS conversion. Moreover, both fMRI (resting state and task) and structural MRI(dwi, t1, t2) Arterial Spin labeling and MEG. For me it would very important to have these demo data to convert them as a separate dataset but also to have a tool convert all these modalities into a single multimodal dataset."
- "I'm currently working on the deep learning methods with eye movement data. It would be very interesting to see the potential multimodal methods between eye tracking data and brain image."
- "Since it is for phd students probably approaching new postdoc positions soon, I think it would be great to make the method we learn in the tutorial as transferrable as possible to other environments, working in slightly different fields, so that it is a skill we can bring with us to the next labs."

Outline for today

- 10:15-12:15
 - BIDS intro
 - Break – make Colab account
 - BIDS basic conversion of a PET phantom data set
- *12:20 Group photo and 12:30-13:30 Lunch*
 - During the lunch break:
 - Run FS install in the Colab
 - Make an EZBIDS account
- 13:30-16:00
 - EZBids conversion
 - Running analysis with BIDS data
 - BIDS for machine learning

