

# **Bachelor's Thesis:** **MRI with BART - An interactive online course**

## **Overview**

The Berkeley Advanced Reconstruction Toolbox (BART) is a free and open-source image-reconstruction framework for Computational Magnetic Resonance Imaging. It is developed mainly at the Institute of Biomedical Imaging.

As with any power tool, to get the most out of BART, one needs to learn how to use it. To this end, we have provided many lectures, webinars, workshops etc.. Most of the material is available online at <https://gitlab.tugraz.at/ibi/mrirecon/tutorials>. Still, especially for people who are new to the field, the learning curve can be quite steep, and additionally there is material which is increasingly out-of-date. To this end, we aim to create an online course for MRI with BART, based on existing materials.

## **Specific Tasks**

- Getting familiar with BART usage
- Get to know available educational BART resources
- Curate existing tutorials and add new ones, where required
- Evaluate outcome

## **Recommended Knowledge**

- Basic general Linux / WSL knowledge (BASH)
- Python and Jupyter Notebooks
- MRI knowledge (at least Grundlagenlabor)
- An interest in educational topics



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