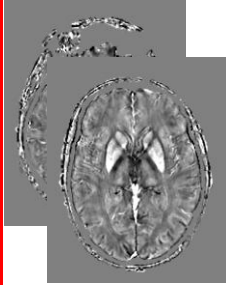# QSMxT: End-to-end QSM in a Container
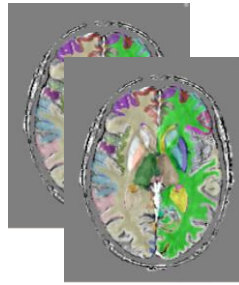
Ashley Stewart, Thomas Shaw, Steffen Bollmann

QSM reconstruction

Template space construction
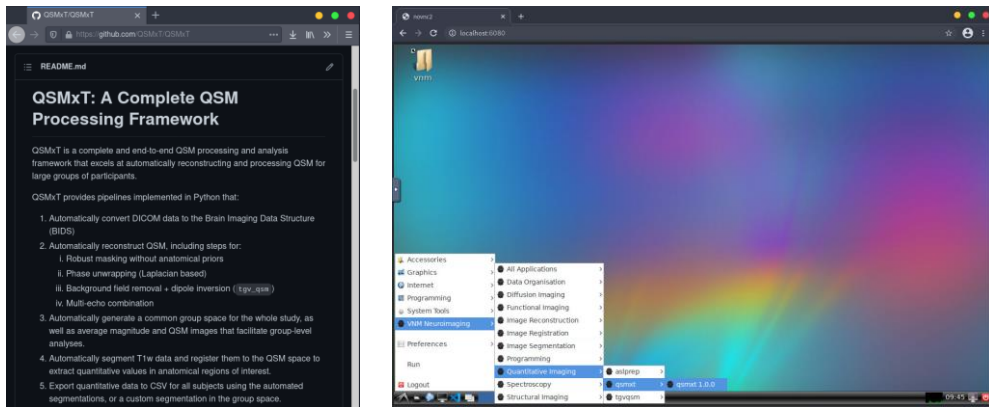
Segmentation

Susceptibility by participant and ROI

QSMxT is an automated, end-to-end Quantitative Susceptibility Mapping pipeline with straightforward scripts for QSM reconstruction, template space construction for group-level analysis, automated segmentations in the QSM space and the export of susceptibility values by participant and region of interest.

QSMxT: End-to-end QSM in a Container

Links:
GitHub: https://github.com/QSMxT/QSMxT
bioRxiv: https://doi.org/10.1101/2021.05.05.442850

QSMxT is open-source and freely available on GitHub.

It is distributed as a single software container with all dependencies installed, enabling a simple setup.

The easiest way to get QSMxT is to use the Virtual Neuroimaging Machine from the Neurodesk project, which provides a virtual desktop with scripts that can automatically download neuroimaging software containers, including the QSMxT container. You can see here that it is available through the applications menu.

One of QSMxT's major features is that it can process multiple subjects and processing steps in parallel using multiple CPUs or threads, and can also utilise cluster computing systems including PBS.

We encourage you to use QSMxT in your next project and let us know about your experience on GitHub. QSMxT is in a rapid development cycle and we would like to hear from you to know how you would like to use it and what features would be helpful.