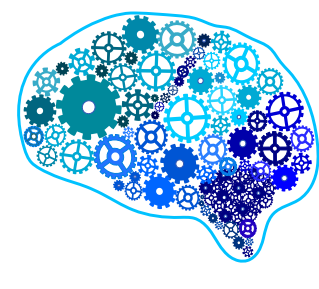




ChRIS Project



FNNDESC
Fetal-Neonatal Neuroimaging
Developmental Science Center



Boston Children's Hospital
Where the world comes for answers



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL



<https://fetalmri.org>

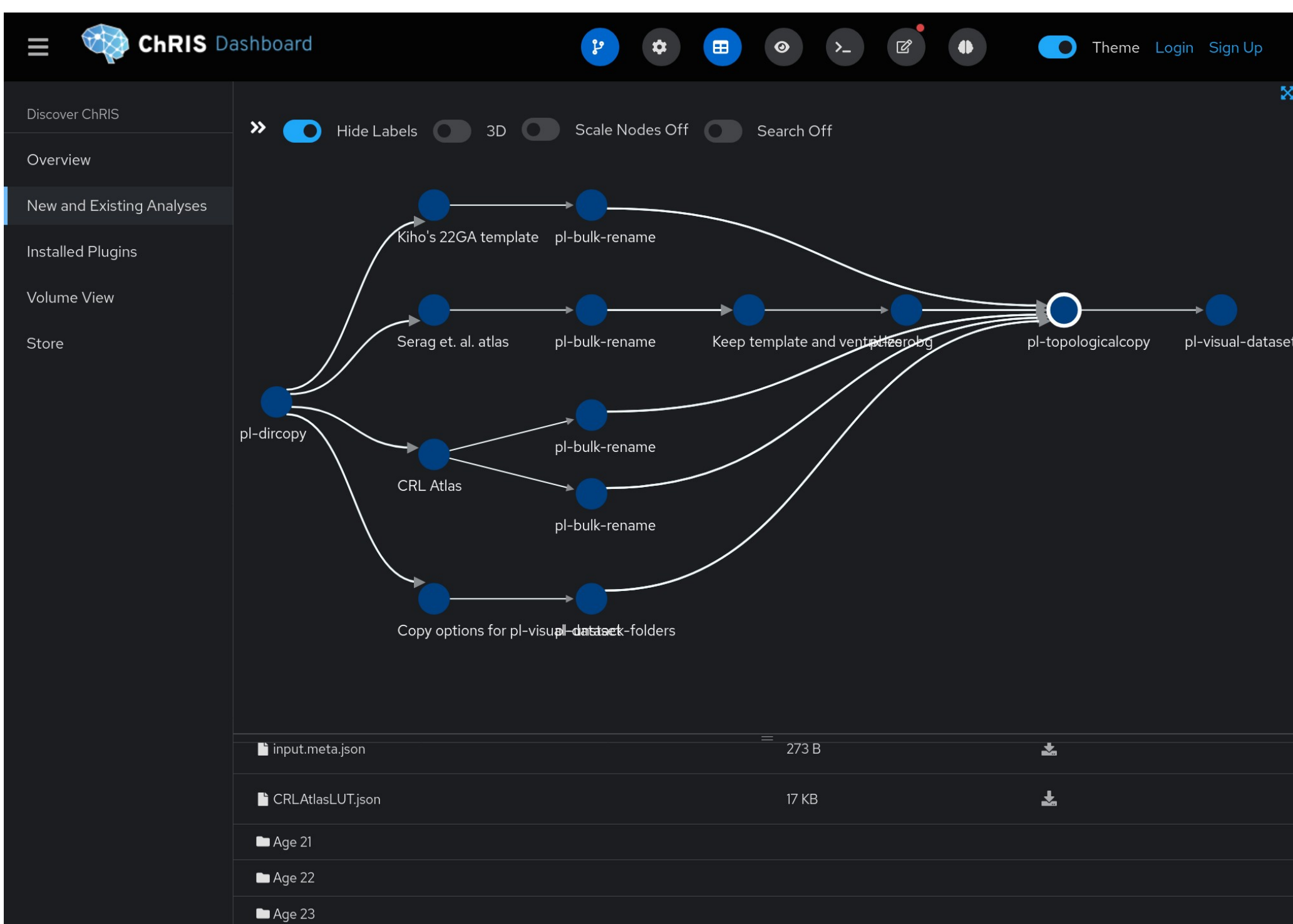
Open-Source Web Brain Atlas Viewer

Jennings Zhang¹, Rudolph Pienaar¹, and Ellen Grant¹

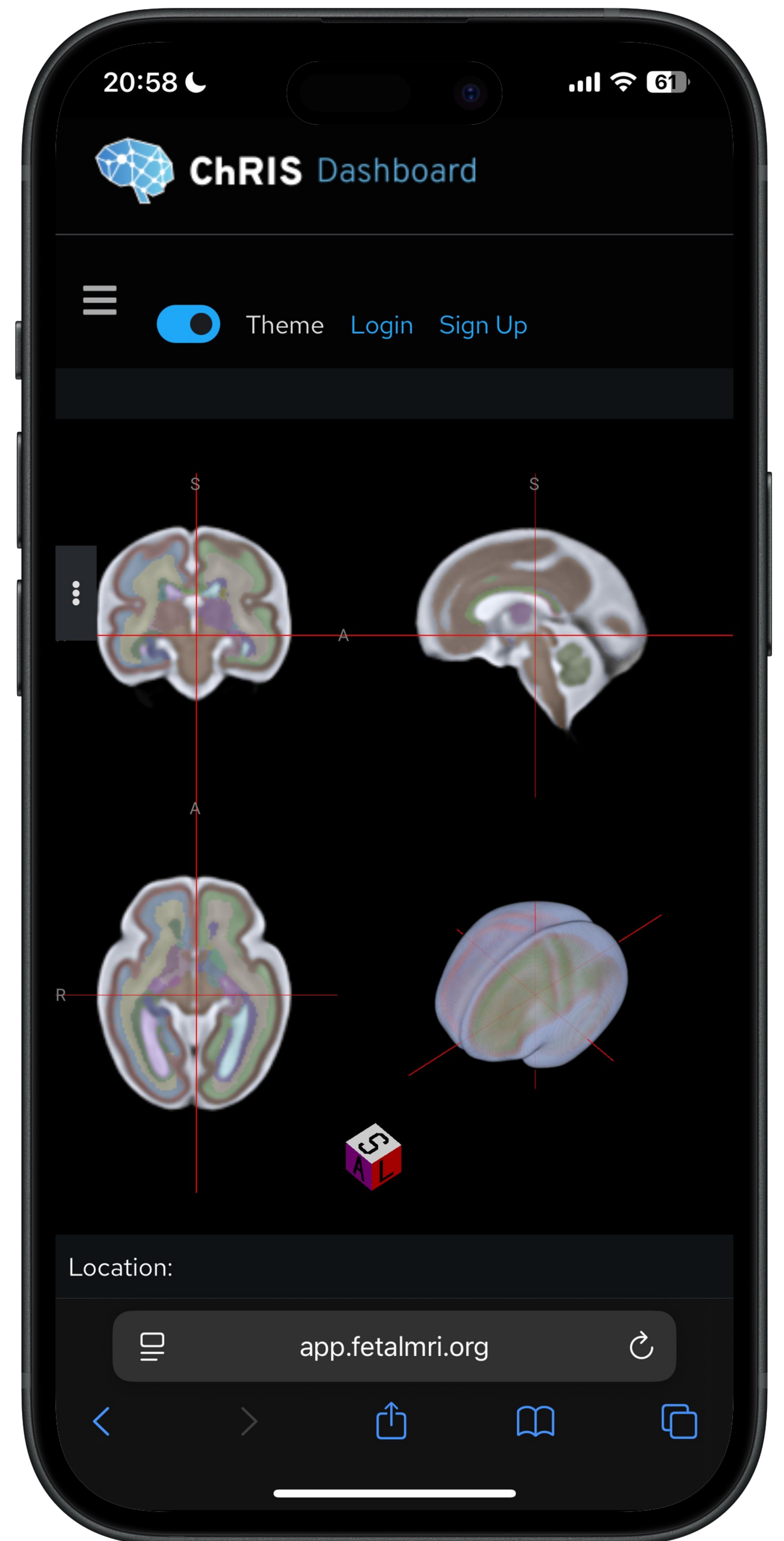
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Abstract

<https://fetalmri.org> is a web-based neuroimaging platform based on the open-source *ChRIS* project¹. On this website, we provide public access to two fetal brain MRI atlases: Serag et al.² and Gholipour et al.³. *ChRIS* associates the [visualized datasets](#) with their computational [data provenance](#), making open science into something you can see.



- Open data
- Open science
- Open source



Features



React.js +
WebGL2



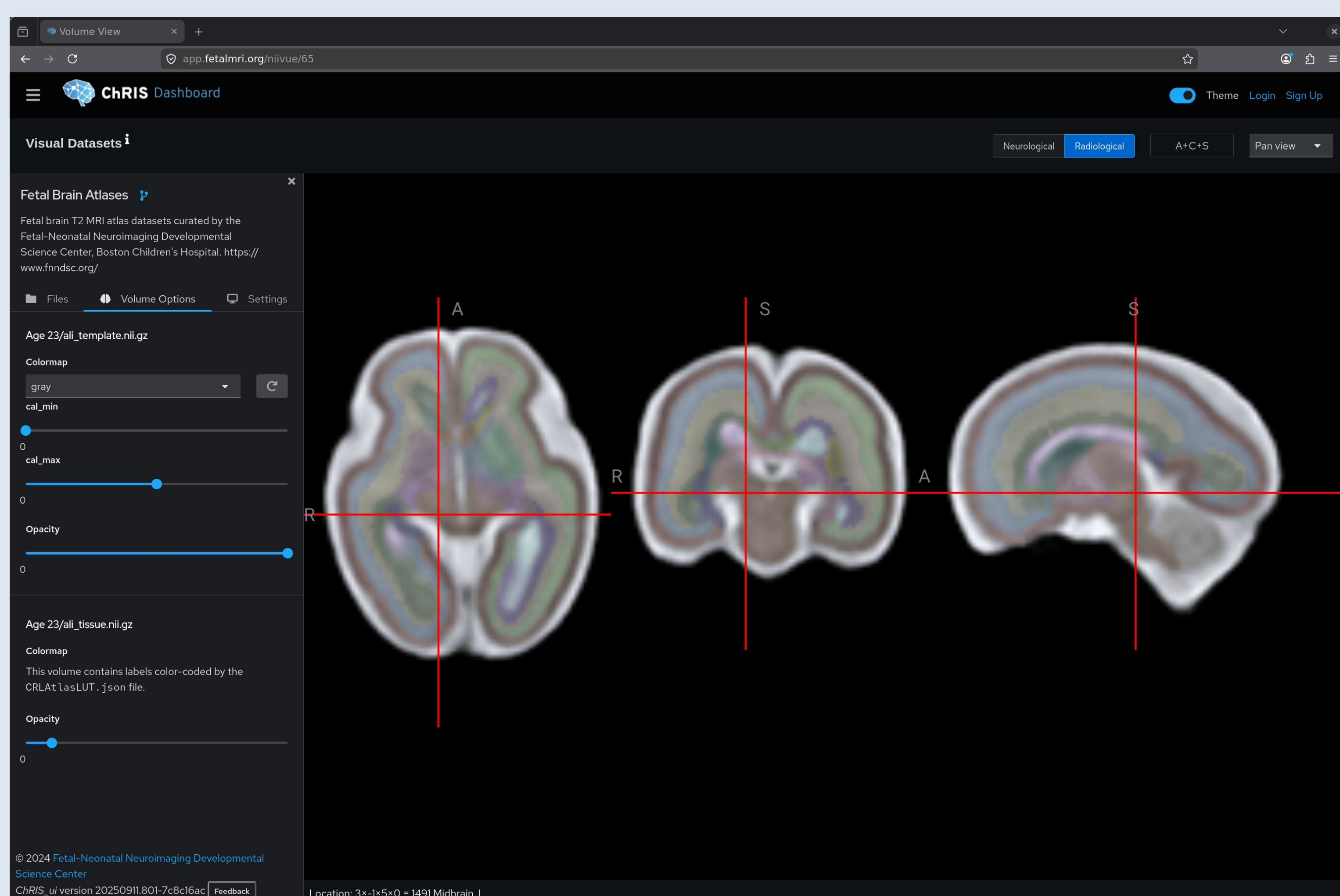
Mobile-
friendly



Configuration
& tooling



NIFTI, MGZ,
etc.



Impact

Bridging research with medicine, the fetalmri.org website is used daily by practicing neuroradiologists for [reference](#) and [education](#). In particular, atlases and visualization software are important tools for medical education, especially in niche sub-specialties such as fetal brain MRI.

Additionally, in developing fetalmri.org we have contributed to [upstream open-source](#) projects, most notably NiiVue⁴.

ChRIS provides a single unified web-based platform for advanced computation, visualization, and dissemination. Going beyond these specific fetal atlases, the underlying technologies facilitate future open science and brain mapping projects.

References

- ¹Zhang et al. "Bridging Science and Medicine with the ChRIS Research Integration System". HICSS; 2026. doi:10.24251/HICSS.2026.414
- ²Serag et al. "Construction of a consistent high-definition spatio-temporal atlas of the developing brain using adaptive kernel regression". Neuroimage 2012. doi: 10.1016/j.neuroimage.2011.09.062
- ³Gholipour et al. "A normative spatiotemporal MRI atlas of the fetal brain for automatic segmentation and analysis of early brain growth". Sci Rep; 2017. doi:10.1038/s41598-017-00525-w
- ⁴Hanayik et al. Niivue/Niivue. Zenodo; 2025. doi:10.5281/zenodo.15570926