

Computational Methods for Neuroimaging in R, an Example in Hemorrhagic Stroke Hemorrhage

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Intracranial hemorrhage (ICH), or hemorrhagic stroke, is a potentially lethal condition when a blood vessel ruptures in the brain. Currently, the location of the hemorrhage is described manually and qualitatively. I will present a full pipeline to describe the location of hemorrhage quantitatively using X-ray computed tomography (CT) scans.

As many pieces of software were used to preprocess and analyze the data, I will present the Neuroconductor project, an attempt to integrate commonly-used neuroimaging software packages into R. This integration and additional tutorials will hopefully lead to more statisticians and R users to perform full analyses of neuroimaging data.