

Using Python and Fabric for analyzing brain signals on OSG Connect

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<https://docs.google.com/presentation/d/1s5n-ObLv5In3lVpquUqO7RZDEMf5WjXzYmJJGdraA/edit?usp=sharing>
As data collection systems are augmented, more individual labs require high-throughput computing in order to process all of their data. In these labs, researchers are continuously developing their own analytics methods in scripting languages. These facts are especially true in the neuroscience community, in which brain recordings often contain several hundred channels, sampled at over 1000Hz, for sometimes weeks at a time. New methodology for extracting information from these signals are being developed in Python due to its wide variety of packages, great documentation, and open-source culture. This presentation will cover an example application of OSG to parallelize analysis of multiple neural signals using both public and private libraries and transferring output. It will also cover the Python package Fabric to automate the process of logging into and running commands on the OSG submit server. This tutorial's release led to an increase in OSG connect users interested in using Python, which will help to improve the support for Python usage on OSG connect.

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Session Classification: OSG Users