Pyret: A Python package for analysis of neurophysiology data

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Summary

The *pyret* package contains tools for analyzing neural electrophysiology data. It focuses on applications in sensory neuroscience, broadly construed as any experiment in which one would like to characterize neural responses to a sensory stimulus. Pyret contains methods for manipulating spike trains (e.g. binning and smoothing), pre-processing experimental stimuli (e.g. resampling), computing spike-triggered averages and ensembles (Schwartz et al. 2006), estimating linear-nonlinear cascade models to predict neural responses to different stimuli (Chichilnisky 2001), part of which follows the scikit-learn API (Pedregosa et al. 2011), as well as a suite of visualization tools for all the above. We designed *pyret* to be simple, robust, and efficient with broad applicability across a range of sensory neuroscience analyses.

Full API documentation and a short tutorial can be found at http://pyret.readthedocs.io/

References

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