Resource Summary Report

Generated by FDI Lab - SciCrunch.org on May 4, 2024

Calcium Imaging data Analysis

RRID:SCR_021533
Type: Tool

Proper Citation

Calcium Imaging data Analysis (RRID:SCR_021533)

Resource Information

URL: https://github.com/flatironinstitute/CaImAn

Proper Citation: Calcium Imaging data Analysis (RRID:SCR_021533)

Description: Open source software tool for scalable calcium imaging data analysis. Used for large scale calcium imaging analysis, including movie handling, motion correction, source extraction, spike deconvolution and result visualization.

Abbreviations: CaImAn

Resource Type: software toolkit, data processing software, software resource, image analysis software, software library, software application

Defining Citation: DOI:10.7554/elife.38173

Keywords: calcium imaging analysis, movie handling, motion correction, source extraction, spike deconvolution, result visualization, OpenBehavior

Availability: Free, Available for download, Freely Available

Resource Name: Calcium Imaging data Analysis

Resource ID: SCR_021533

Alternate URLs: https://edspace.american.edu/openbehavior/project/caiman/

Ratings and Alerts

No rating or validation information has been found for Calcium Imaging data Analysis.

No alerts have been found for Calcium Imaging data Analysis.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 22 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

Baker CM, et al. (2024) A Semi-supervised Pipeline for Accurate Neuron Segmentation with Fewer Ground Truth Labels. eNeuro, 11(2).

de Malmazet D, et al. (2024) Retinal origin of orientation but not direction selective maps in the superior colliculus. Current biology : CB, 34(6), 1222.

Eom M, et al. (2023) Statistically unbiased prediction enables accurate denoising of voltage imaging data. Nature methods, 20(10), 1581.

Obara K, et al. (2023) Change detection in the primate auditory cortex through feedback of prediction error signals. Nature communications, 14(1), 6981.

Petzold A, et al. (2023) Complementary lateral hypothalamic populations resist hunger pressure to balance nutritional and social needs. Cell metabolism, 35(3), 456.

Petter EA, et al. (2023) Elucidating a locus coeruleus-dentate gyrus dopamine pathway for operant reinforcement. eLife, 12.

Li C, et al. (2023) Pathway-specific inputs to the superior colliculus support flexible responses to visual threat. Science advances, 9(35), eade3874.

Lloyd E, et al. (2023) A protocol for whole-brain Ca2+ imaging in Astyanax mexicanus, a model of comparative evolution. STAR protocols, 4(4), 102517.

Yang JY, et al. (2023) Restructuring of olfactory representations in the fly brain around odor relationships in natural sources. bioRxiv : the preprint server for biology.

Chambers AR, et al. (2022) Cell-type-specific silence in thalamocortical circuits precedes hippocampal sharp-wave ripples. Cell reports, 40(4), 111132.

Zhang Y, et al. (2022) Detailed mapping of behavior reveals the formation of prelimbic neural ensembles across operant learning. Neuron, 110(4), 674.

Jarzebowski P, et al. (2022) Different encoding of reward location in dorsal and intermediate hippocampus. Current biology : CB, 32(4), 834.

Hattori R, et al. (2022) PatchWarp: Corrections of non-uniform image distortions in two-photon calcium imaging data by patchwork affine transformations. Cell reports methods, 2(5), 100205.

Zhuang J, et al. (2021) Laminar distribution and arbor density of two functional classes of thalamic inputs to primary visual cortex. Cell reports, 37(2), 109826.

Hennestad E, et al. (2021) Mapping vestibular and visual contributions to angular head velocity tuning in the cortex. Cell reports, 37(12), 110134.

Weglage M, et al. (2021) Complete representation of action space and value in all dorsal striatal pathways. Cell reports, 36(4), 109437.

Sato M, et al. (2020) Distinct Mechanisms of Over-Representation of Landmarks and Rewards in the Hippocampus. Cell reports, 32(1), 107864.

Heath SL, et al. (2020) Circuit Mechanisms Underlying Chromatic Encoding in Drosophila Photoreceptors. Current biology : CB, 30(2), 264.

Wu Y, et al. (2020) An Optical Illusion Pinpoints an Essential Circuit Node for Global Motion Processing. Neuron, 108(4), 722.

Najafi F, et al. (2020) Excitatory and Inhibitory Subnetworks Are Equally Selective during Decision-Making and Emerge Simultaneously during Learning. Neuron, 105(1), 165.