Metadata checklist for depositing data into CSHL Community Repository

*To be attached with data set deposit*

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Full citation of corresponding paper or data set title:

Single-trial neural dynamics are dominated by richly varied movements

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Abstract:

When experts are immersed in a task, do their brains prioritize task-related activity? Most efforts to understand neural activity during well-learned tasks focus on cognitive computations and task-related movements. We wondered whether task-performing animals explore a broader movement landscape and how this impacts neural activity. We characterized movements, using video and other sensors and measured neural activity using widefield and two-photon imaging. Cortex-wide activity was dominated by movements, especially uninstructed movements not required for the task. Some uninstructed movements were aligned to trial events. Accounting for them revealed that neurons with similar trial-averaged activity often reflected utterly different combinations of cognitive and movement variables. Other movements occurred idiosyncratically, accounting for trialby-trial fluctuations that are often considered ‘noise’. This held true throughout task-learning and for extracellular Neuropixels recordings that included subcortical areas. Our observations argue that animals execute expert decisions while performing richly varied, uninstructed movements that profoundly shape neural activity.

1.) How large is the data file set?

 The data set has a total size of ~3TB

2.) How long (timeframe) does the data need to be preserved / maintained for?

 5 years

3.) What format is the data set?

 The data set is composed of Matlab (.mat) files and some video data in .avi format

4.) Is there an embargo (and if so, how long) needed to accompany the data set?

 No

5.) What license is this data to be released under?

 CC BY 4.0: Free use and share of the data.

6.) Does this deposit require a DOI?

 Yes

7.) Please provide an attachment for the description that accompanies the data set. This is to ensure that the next individual who downloads the data set will be able to understand the details that the data set is meant to convey in its entirety.

For example:

Administrative metadata:

When / how was data created?

What software is required to use the data?

Any copyright permission / intellectual rights associated with the data?

Key dates associated with data (start date, end date, etc.)?

Where else is the data located / stored?

 Descriptive metadata:

 What is the title of the dataset?

 Who is the author of the dataset?

 Are there associated subject keywords with the dataset?

 Methodology for collecting and analyzing the dataset?

 Structural metadata

 How are the associated files organized?