

---

# Supplementary Material for NeurIPS 2024 Datasets and Benchmarks Track Submission #1356

---

Sasha Salter\*, Rick Warren\*, Collin Schlager\*, Adrian Spurr, Shangchen Han, Rohin Bhasin†, Yujun Cai, Peter Walkington, Anuluwapo Bolarinwa, Robert Wang, Nathan Danielson, Josh Merel†, Eftychios Pnevmatikakis, and Jesse Marshall

Reality Labs, Meta

## 1 Checklist

2 For the checklist, see the main paper submission, where it is included after the references section.

## 3 A Datasheet

4 For the datasheet, see the main paper submission, where it is included after the checklist section (in  
5 the Appendix). The datasheet contains details regarding: how the data was collected and organized;  
6 what kind of information it contains; how it should be used ethically and responsibly; how it will be  
7 made available and maintained. Specific included details are hosting and dataset licenses as well as  
8 maintenance and long-term preservation plans.

## 9 B Dataset Details

10 For further dataset details, including ethical and societal implications, see the main paper submission,  
11 where it is included in the Appendix.

## 12 C Dataset and Code Access

13 **Data:** [https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose\\_dataset.tar](https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose_dataset.tar)

14 **Metadata:** [https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose\\_metadata.](https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose_metadata.csv)  
15 **csv**

16 Reviewers can download the entirety of the *emg2pose* dataset from [https://fb-ctrl-oss.s3.](https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose_dataset.tar)  
17 [amazonaws.com/emg2pose/emg2pose\\_dataset.tar](https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose_dataset.tar). The dataset consists of 25, 253 HDF5 files,  
18 each consisting of time-aligned sEMG and joint angles for a single hand in a single stage. In total,  
19 we collected data from 193 participants, spanning 370 hours and 29 diverse stages.

20 The associated code repository to load the dataset and reproduce the experiments in our submission  
21 can be found under the *emg2pose-main* directory packaged within the uploaded supplementary  
22 materials zip file. The *emg2pose-main/README.md* file outlines detailed instructions for installing  
23 the package and running experiments with the same model configuration needed to reproduce the  
24 experimental results in Tables 4 and 5. Pre-trained models are also hosted on Amazon S3, with

---

\*Equal contribution.

†Work done while at Meta.

25 their links provided in the emg2pose/README.md file. These models can also be ran to reproduce  
26 the test analyses in Tables 4 and 5 of the main paper. The included [https://fb-ctrl-oss.s3.](https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose_metadata.csv)  
27 [amazonaws.com/emg2pose/emg2pose\\_metadata.csv](https://fb-ctrl-oss.s3.amazonaws.com/emg2pose/emg2pose_metadata.csv) file includes information about the dataset  
28 splits and generalization conditions discussed in Section 3.

29 The codebase will be made publicly available on GitHub ([https://github.com/](https://github.com/facebookresearch/emg2pose)  
30 [facebookresearch/emg2pose](https://github.com/facebookresearch/emg2pose)) for camera-ready submission and will thus come with a  
31 persistent dereferenceable identifier. The code will be released under the CC-BY-NC-SA  
32 4.0 license. Any future update, as well as ongoing maintenance such as tracking and resolving  
33 issues identified by the broader community, will be performed and distributed through the GitHub  
34 repository.

## 35 **D Supplementary Videos**

36 In the attached zipped supplementary materials folder, we include an mp4 video containing the 12  
37 example videos for *vemg2pose, tracking*, and *vemg2pose, regression* for *held-out user*, and *held-out*  
38 *user, stage* generalization tasks, as well as *vemg2pose, tracking online* (see Figure 1 and Section 4.1  
39 in the main paper for further description of this setting). For *vemg2pose, tracking*, and *vemg2pose,*  
40 *regression*, we provide video examples for varying performing users and stages, akin to Figure 4 and  
41 Figures 11 - 14 in the main paper.

## 42 **E Contact Details**

43 If the reviewers experience any issues (e.g. with relation to the code and videos), please reach out on  
44 Openreview or to [sashasalter@meta.com](mailto:sashasalter@meta.com).