

Supplementary Software 1

Python code for reproducing Figures 1–4

Companion preview for the anonymous Python plotting and validation software supplied with this submission. The archive contains plotting and validation scripts, documented dependencies, and the ten derived figure tables used to regenerate the manuscript figures.

Package contents

- Python plotting and validation scripts for the four manuscript figures.
- Ten derived CSV/TSV figure-source tables and a manifest recording panel mappings, fields, row counts, hashes, and experimental units.
- A README with installation instructions, the reproduction command, and expected output files.

Reproduction

From the extracted package root, install the listed dependencies and run:

```
python -m pip install -r requirements.txt

python -X utf8 source/figure_scripts/render_figures.py \
  --out outputs/figures --dpi 450 \
  --only p1_f1 p1_f2 p1_f3 p1_f4
```

Expected outputs

The command writes one PDF and one PNG for each figure, a combined four-page PDF, output hashes, a source-to-plot ledger, coordinate bounds, and a completeness report. Each figure must report zero missing source values.

Scope and portability

The package reproduces and validates Figures 1–4 from the supplied derived figure tables; it does not rerun model training or upstream experiments. It excludes model checkpoints and the original KuaiRand user-level records. The separate Source Data attachment also includes the archived naturalistic manipulation table. Arial is recommended for visual parity; when unavailable, Matplotlib may substitute another sans-serif font without changing numeric completeness or coordinate checks.

The software archive is supplied confidentially for editorial and peer-review inspection. Public software licensing information will accompany the archival release.