KREIMAN LAB. http://klab.tch.harvard.edu

README

This document refers to the following publication:

Predicting episodic memory formation for movie events
Hanlin Tang, Jed Singer, Matias Ison, Gnel Pivazyan, Melissa Romaine, Rosa Frias, Elizabeth Meller, Adrianna Boulin, James Carroll, Victoria Perron, Sarah Dowcett, Marlise Arellano, Gabriel Kreiman
Scientific Reports 2016
Main text
Supplementary Material
Additional Web Figures

Link to manuscript, supplementary material, data and code
http://klab.tch.harvard.edu/resources/Tangetal_episodicmemory_2016.html#sthash.zj1iktky.dpbs

File names
Experiment 1: analyze_memeval_load_results_v2_exp1_tt400_tc0.55_tb0.30_tr20.mat [1.9M]
Experiment 2: analyze_memeval_load_results_v2_exp2_tt400_tc0.55_tb0.30_tr20.mat [1.9M]
Experiment 3: analyze_memeval_load_results_v2_exp3_tt400_tc0.55_tb0.30_tr20.mat [1.1M]
Experiment 4: analyze_memeval_load_results_v2_exp4_tt400_tc0.55_tb0.30_tr20.mat [0.4M]

Behavioral data structure

```
load analyze_memeval_load_results_v2_exp1_tt400_tc0.55_tb0.30_tr20.mat
```
All the most relevant behavioral data are stored in the variable `output_alls`, described below

```
whos
```

Variable	Size	Bytes	Type
d_call_times_alls	1x52	7496	cell
duration_info_alls	1x52	3122240	cell
list_of_subjects	1x52	6464	cell
movie_output_alls	1x52	165568	cell

n_correct_alls	1x52	13312	cell
n_empty	1x1	8	double
n_excluded	1x1	8	double
n_found	1x1	8	double
n_quality	1x1	8	double
n_subjects	1x1	8	double
n_total_alls	1x52	13312	cell
n_trials_per_session_per_subject	113x5	4520	double
n_trials_per_subject	113x1	904	double
output_alls	1x52	33545344	cell
session_number_alls	1x52	1464064	cell
single_output_alls	1x52	77376	cell
sorted_responses_alls	1x52	1464064	cell

```
subject_number = 1;
data = output_alls{subject_number};
whos data
data    2369x23        435896  double
[n_trials,n_columns]=size(data);
%n_trials = number of trials = 2369
```

Annotated example

```
data(10,3)
```

Column	Value	Variable name	Current value	Notes
1	0	main_or_control	foil trial	1 for main movie, 0 for controls
2	0	sound_or_not	no sound	1 for sound, 0 not sound
3	0	static_or_not	movie shot trial	1 for single frames, 0 for movie shots
4	0	flip_or_not	no flip trial	1 to flip Left/Right, 0 no flip

5	2	cut_index	ignore	index according to the list of cuts used in memeval (note: this is not the actual cut number, which is stored in column 10)
6	3770	init_frame	shot starts at frame 3770	initial frame number for the movie shot
7	3838	finit_frame	shot starts at frame 3838	final frame number for the movie shot ((if static_or_not==1, then a single frame was presented, column 8))
8	0	selected_frame	movie shot trial	frame shown when static_or_not=1
9	0	gray_or_not	movie shot shown in color	1 for grayscale and 0 otherwise
10	108	curr_cut	cut number 108	actual cut number
11	0	reverse_or_not	not reversed	1 if frame order was reversed and 0 otherwise
12	0	occlude_or_not	no occlusion	1 if frame was partially occluded and 0 otherwise
13	0	quadrant	irrelevant because there was no occlusion in this trial	quadrant shown if occlude_or_not=1
14	2	episode	Episodoe 2	episode number
15	2	response	"No"	subject response, "1 = yes, seen before", 2=no, not seen before"
16	1	correct	Correct response	1 for correct responses and 0 otherwise
17	3	curr_file_id	ignore	file ID number
18	3	curr_session	Session 3	Session number (at different time points post encoding)
19	2012	year	2012	year
20	7	month	7	month
21	26	day	26	day
22	19	hour	19	hour
23	46	minute	46	minute