Data information

#	Name	#video		Duration (video)		Length of the action		#instances		Mean lenght		Std Deviation Lenght	
		training	test	training	test	training	test	training	test	training	test	training	test
1	carrot	3	3	00:00:31	00:00:30	4336	3401	60	79	45,27	35,06	2,24	13,11
2	cutting	3	3	00:01:04	00:01:04	6371	6737	18	17	304,44	358,94	54,62	54,49
3	dish	3	3	00:00:22	00:00:14	1856	2109	18	17	48,22	46,24	1,96	6,10
4	eating	3	3	00:01:18	00:01:21	7415	8151	14	14	517,29	531,79	112,71	104,08
5	eggs	3	3	00:00:27	00:00:29	3045	3329	77	80	26,68	28,45	4,67	9,58
6	lemon	3	3	00:00:22	00:00:19	3391	2318	23	17	82,61	76,59	13,21	16,14
7	mezzaluna	3	3	00:00:23	00:00:25	2447	3024	26	35	66,88	57,29	4,29	3,03
8	mixing	3	3	00:00:22	00:00:23	2662	3050	17	20	70,59	84,20	2,35	4,83
9	openbottle	3	3	00:01:15	00:01:06	7500	6684	19	15	354,37	334,13	31,75	27,03
10	pan	3	3	00:00:49	00:00:31	4460	3312	20	17	128,90	133,18	15,79	31,99
11	pestling	3	3	00:00:21	00:00:25	2026	2556	24	19	70,04	79,05	16,58	5,01
12	pouringmult	3	3	00:00:38	00:00:37	4508	4180	12	10	272,00	250,60	29,10	36,41
13	pouringsingle	3	3	00:01:35	00:01:31	9229	9122	20	20	436,05	408,75	60,62	61,32
14	reaching	3	3	00:01:15	00:00:13	7335	7728	21	18	318,86	360,89	36,51	90,60
15	rolling	3	3	00:00:30	00:00:36	3064	4083	25	22	103,16	133,91	26,10	25,09
16	salad	3	3	00:00:30	00:00:30	3024	3171	22	19	109,36	108,63	16,30	4,04
17	salting	3	3	00:00:47	00:00:43	5056	4775	18	17	192,33	202,65	42,17	42,21
18	spreading	3	3	00:00:52	00:00:51	5343	5624	23	20	197,87	217,75	28,39	38,37
19	table	3	3	00:00:22	00:00:20	2333	2110	21	19	81,10	67,37	39,66	2,22
20	transporting	3	3	00:01:11	00:01:14	7201	7713	38	35	178,92	189,40	37,31	42,93
		60	60	0:14:54	0:13:22			516	510				

Taxonomy

Action	#	Semantic					Spatial occupation			Velocity		
		continuous	with pause	circular	forward backward	mixed	spreads on one axis	spreads on two axes	spreads on all axes	spreads on one axis	spreads on two axes	spreads on all axes
carrot	1	x			x		x			x		
cutting	2		x			x		x		x		
dish	3	x			x				x			x
eating	4		x		x				x			x
eggs	5	x		x					x			x
lemon	6	x		x				x				x
mezzaluna	7	x			x			x			x	
mixing	8	x		x			x					x
openbottle	9	x		x				x				x
pan	10	x				x			x			x
pestling	11	x				x		x			x	
pouringmult	12	x				x	x					x
pouringsingle	13		x		x				x			x
reaching	14		x		x			x				x
rolling	15	x			x		x			x		
salad	16	x		x				x			x	
salting	17		x			x		x			x	
spreading	18	x			x			x				x
table	19	x			x		x			x		
transporting	20		x		x			x				x

Action	#	Instance length			Velocity at segmentation instants				Use of objects		Both hands	
		Less than 1sec	Between 1 and 3 sec	More than 3sec	One axis near zero	Two axes near zero	All axes near zero	All axes with velocity >> 0	yes	no	yes	no
carrot	1	x						x	x			x
cutting	2			x		x			x			x
dish	3	x						x	x			x
eating	4			x			x		x			x
eggs	5	x						x	x			x
lemon	6	x						x	x			x
mezzaluna	7	x			x				x		x	
mixing	8	x						x	x			x
openbottle	9			x	x					x		x
pan	10		x			x				x	x	
pestling	11	x			x				x			x
pouringmult	12		x		x				x			x
pouringsingle	13			x			x		x			x
reaching	14			x			x			x		x
rolling	15		x					x	x		x	
salad	16		x		x				x			x
salting	17		x		x				x			x
spreading	18		x		x				x			x
table	19	x						x	x			x
transporting	20			x			x			x		x

Scenes composition

Scene	File	Action	#	MoCap startFrame	endFrame
1	Scene1.mat	eggs	5	1165	1185
1	Scene1.mat	eggs	5	1185	1212
1	Scene1.mat	eggs	5	1212	1252
1	Scene1.mat	eggs	5	1252	1270
1	Scene1.mat	eggs	5	1270	1292
1	Scene1.mat	eggs	5	1292	1313
1	Scene1.mat	eggs	5	1313	1334
1	Scene1.mat	eggs	5	1334	1357
1	Scene1.mat	eggs	5	1357	1379
1	Scene1.mat	eggs	5	1379	1401
1	Scene1.mat	eggs	5	1401	1430
1	Scene1.mat	eggs	5	1430	1478
1	Scene1.mat	pause	0	1478	1815
1	Scene1.mat	reaching	14	1815	2014
1	Scene1.mat	pause	0	2014	2304
1	Scene1.mat	transporting	20	2304	2567
1	Scene1.mat	pause	0	2567	2766
1	Scene1.mat	salting	17	2766	2969
1	Scene1.mat	pause	0	2969	3108
1	Scene1.mat	transporting	20	3108	3250
1	Scene1.mat	pause	0	3250	3393
1	Scene1.mat	reaching	14	3393	3553
1	Scene1.mat	pause	0	3553	3695
1	Scene1.mat	pouringsingle	13	3695	4188
1	Scene1.mat	transporting	20	4213	4364
1	Scene1.mat	pause	0	4364	4725
1	Scene1.mat	reaching	14	4725	4746
1	Scene1.mat	pause	0	4746	4934
1	Scene1.mat	eggs	5	4934	4954
1	Scene1.mat	eggs	5	4954	4970
1	Scene1.mat	eggs	5	4970	4988
1	Scene1.mat	eggs	5	4988	5008
1	Scene1.mat	eggs	5	5008	5029
1	Scene1.mat	eggs	5	5029	5050
1	Scene1.mat	eggs	5	5050	5073
1	Scene1.mat	eggs	5	5073	5093
1	Scene1.mat	eggs	5	5093	5113
1	Scene1.mat	eggs	5	5113	5136
1	Scene1.mat	eggs	5	5136	5154
1	Scene1.mat	eggs	5	5154	5204
1	Scene1.mat	eggs	5	5204	5220
1	Scene1.mat	eggs	5	5220	5274
1	Scene1.mat	eggs	5	5274	5319
1	Scene1.mat	eggs	5	5319	5353

Scene	File	Action	#	MoCap startFrame	endFrame
2	Scene2.mat	reaching	14	818	934
2	Scene2.mat	pause	0	934	1020
2	Scene2.mat	transporting	20	1020	1159
2	Scene2.mat	pause	0	1159	1285
2	Scene2.mat	carrot	1	1285	1358
2	Scene2.mat	carrot	1	1358	1439
2	Scene2.mat	carrot	1	1439	1510
2	Scene2.mat	carrot	1	1510	1563
2	Scene2.mat	carrot	1	1536	1615
2	Scene2.mat	carrot	1	1615	1667
2	Scene2.mat	carrot	1	1667	1719
2	Scene2.mat	carrot	1	1719	1778
2	Scene2.mat	carrot	1	1778	1827
2	Scene2.mat	carrot	1	1827	1874
2	Scene2.mat	carrot	1	1874	1929
2	Scene2.mat	carrot	1	1929	1972
2	Scene2.mat	carrot	1	1972	2015
2	Scene2.mat	carrot	1	2015	2060
2	Scene2.mat	carrot	1	2060	2110

Scenes composition

Scene	File	Action	#	MoCap startFrame	MoCap endFrame
2	Scene2.mat	carrot	1	2110	2154
2	Scene2.mat	carrot	1	2154	2188
2	Scene2.mat	pause	0	2188	2283
2	Scene2.mat	transporting	20	2283	2429

Scene	File	Action	#	MoCap startFrame	MoCap endFrame
3	Scene3.mat	reaching	14	932	1097
3	Scene3.mat	pause	0	1097	1131
3	Scene3.mat	transporting	20	1131	1330
3	Scene3.mat	reaching	14	1368	1498
3	Scene3.mat	pause	0	1498	1572
3	Scene3.mat	openbottle	9	1572	1839
3	Scene3.mat	transporting	20	1839	1992
3	Scene3.mat	pause	0	1992	2068
3	Scene3.mat	reaching	14	2068	2183
3	Scene3.mat	pause	0	2183	2269
3	Scene3.mat	pouringsingle	13	2269	2757
3	Scene3.mat	pause	0	2757	2805
3	Scene3.mat	reaching	14	2805	2980
3	Scene3.mat	transporting	20	2980	3109
3	Scene3.mat	pause	0	3109	3322
3	Scene3.mat	mixing	8	3322	3363
3	Scene3.mat	mixing	8	3363	3423
3	Scene3.mat	mixing	8	3423	3465
3	Scene3.mat	mixing	8	3465	3515
3	Scene3.mat	mixing	8	3515	3561
3	Scene3.mat	mixing	8	3561	3615
3	Scene3.mat	mixing	8	3615	3665
3	Scene3.mat	mixing	8	3665	3714
3	Scene3.mat	mixing	8	3714	3765
3	Scene3.mat	mixing	8	3765	3813
3	Scene3.mat	mixing	8	3813	3861
3	Scene3.mat	mixing	8	3861	3912
3	Scene3.mat	mixing	8	3912	3957
3	Scene3.mat	mixing	8	3957	4010
3	Scene3.mat	mixing	8	4010	4058
3	Scene3.mat	mixing	8	4058	4102
3	Scene3.mat	mixing	8	4102	4147

Scene	File	Action	#	MoCap startFrame	MoCap endFrame
4	Scene4.mat	cutting	2	356	567
4	Scene4.mat	pause	0	567	1123
4	Scene4.mat	transporting	20	1123	1233
4	Scene4.mat	pause	0	1233	1498
4	Scene4.mat	transporting	20	1498	1708
4	Scene4.mat	pause	0	1708	1847
4	Scene4.mat	reaching	14	1847	1982
4	Scene4.mat	transporting	20	1982	2508
4	Scene4.mat	pause	0	2508	2532
4	Scene4.mat	spreading	18	2532	2629
4	Scene4.mat	spreading	18	2629	2759
4	Scene4.mat	spreading	18	2759	2853
4	Scene4.mat	spreading	18	2853	2990
4	Scene4.mat	spreading	18	2990	3072
4	Scene4.mat	spreading	18	3072	3159
4	Scene4.mat	transporting	20	3159	3435
4	Scene4.mat	reaching	14	3435	3629
4	Scene4.mat	pause	0	3629	3858
4	Scene4.mat	eating	4	3858	4952
4	Scene4.mat	eating	4	4952	5486
4	Scene4.mat	eating	4	5486	6294
4	Scene4.mat	eating	4	6294	6993

Scenes composition

| Scene | File | Action | # | MoCap | |
				startFrame	endFrame
5	Scene5.mat	reaching	14	747	914
5	Scene5.mat	pause	0	914	1166
5	Scene5.mat	transporting	20	1166	1358
5	Scene5.mat	lemon	6	1480	1605
5	Scene5.mat	lemon	6	1605	1716
5	Scene5.mat	lemon	6	1716	1827
5	Scene5.mat	lemon	6	1827	1900
5	Scene5.mat	lemon	6	1900	1980
5	Scene5.mat	pause	0	1980	2161
5	Scene5.mat	transporting	20	2161	2333
5	Scene5.mat	pause	0	2333	2462
5	Scene5.mat	reaching	14	2462	2712
5	Scene5.mat	transporting	20	2712	2850
5	Scene5.mat	reaching	14	2850	3191
5	Scene5.mat	transporting	20	3191	3354
5	Scene5.mat	pause	0	3354	3424
5	Scene5.mat	table	19	3424	3489
5	Scene5.mat	table	19	3489	3546
5	Scene5.mat	table	19	3546	3605
5	Scene5.mat	table	19	3605	3666
5	Scene5.mat	table	19	3666	3727
5	Scene5.mat	table	19	3727	3785
5	Scene5.mat	table	19	3785	3844
5	Scene5.mat	table	19	3844	3900
5	Scene5.mat	table	19	3900	3958
5	Scene5.mat	table	19	3958	4038

Video/MoCap synchronization frames

#	Action	startFrame			
		training		test	
		MoCap	video	MoCap	video
1	carrot	1500	90	601	76
2	cutting	850	165	600	85
3	dish	350	210	800	60
4	eating	150	150	580	75
5	eggs	650	75	550	60
6	lemon	1470	90	535	60
7	mezzaluna	570	120	500	60
8	mixing	800	140	850	45
9	openbottle	350	135	350	75
10	pan	1400	570	220	45
11	pestling	150	100	450	120
12	pouringmult	1000	90	750	90
13	pouringsingle	250	140	500	130
14	reaching	200	110	900	140
15	rolling	250	90	930	120
16	salad	110	80	480	120
17	salting	900	210	450	1
18	spreading	110	80	800	70
19	table	350	65	315	90
20	transporting	500	95	400	75

#	Scene	startFrame	
		MoCap	video
1	scene1	1165	120
2	scene2	818	115
3	scene3	932	100
4	scene4	356	1
5	scene5	747	103