

# Trees	Max Depth	Act Vars	Min Samp	Max Cats	1	2	3	4	5	6	7	8	9	10
50	5	10	10	5	0.3462	0.5619	0.4186	0.0961	0.1642	0.6241	0.1767	0.1450	3.7719	12.5247
50	5	10	30	5	0.3458	0.5678	0.4209	0.0961	0.1642	0.6228	0.1776	0.1447	3.7639	12.5469
50	5	20	10	5	0.3427	0.6079	0.4250	0.0971	0.1649	0.6313	0.1698	0.1464	3.7639	9.7494
50	5	20	30	5	0.3437	0.6026	0.4355	0.0973	0.1652	0.6280	0.1716	0.1469	3.7487	9.6068
100	5	10	10	5	0.3461	0.5600	0.4210	0.0961	0.1642	0.6238	0.1778	0.1448	3.7714	12.5337
100	5	10	30	5	0.3457	0.5552	0.4180	0.0961	0.1642	0.6240	0.1774	0.1447	3.7581	12.5288
100	5	20	10	5	0.3435	0.5937	0.4297	0.0970	0.1654	0.6298	0.1706	0.1462	3.7530	10.2175
100	5	20	30	5	0.3434	0.5962	0.4332	0.0969	0.1654	0.6287	0.1711	0.1461	3.7584	10.2648
150	5	10	10	5	0.3460	0.5681	0.4235	0.0961	0.1642	0.6240	0.1779	0.1446	3.7654	12.5486
150	5	10	30	5	0.3456	0.5660	0.4228	0.0961	0.1642	0.6236	0.1782	0.1445	3.7624	12.5459
150	5	20	10	5	0.3425	0.5932	0.4296	0.0969	0.1651	0.6295	0.1721	0.1460	3.7520	10.4621
150	5	20	30	5	0.3425	0.5943	0.4334	0.0968	0.1650	0.6280	0.1696	0.1459	3.7519	10.2745

# Trees	Max Depth	Act Vars	Min Samp	Max Cats	11	12	13	14	15	16	17	18	19	Total EPE
50	5	10	10	5	6.7490	21.9363	1.0417	0.3433	0.2724	0.4193	8.5637	0.9849	0.4638	59.6036
50	5	10	30	5	6.7484	21.9358	1.0795	0.3437	0.2640	0.4166	8.5616	0.9920	0.4701	59.6623
50	5	20	10	5	6.7932	21.9450	1.9050	0.3398	0.2541	0.4380	8.6364	0.9817	0.4658	57.8573
50	5	20	30	5	6.7910	21.8966	1.8325	0.3424	0.2516	0.4369	8.6118	0.9876	0.4674	57.5642
100	5	10	10	5	6.7486	21.9529	1.0324	0.3442	0.2679	0.4180	8.5640	0.9847	0.4662	59.6178
100	5	10	30	5	6.7494	21.9365	1.1318	0.3434	0.2662	0.4183	8.5621	0.9877	0.4693	59.6767
100	5	20	10	5	6.7809	21.8788	1.8946	0.3390	0.2562	0.4375	8.6071	0.9850	0.4623	58.1879
100	5	20	30	5	6.7883	21.9031	1.9260	0.3368	0.2518	0.4360	8.6225	0.9820	0.4616	58.3123
150	5	10	10	5	6.7479	21.9302	1.0471	0.3436	0.2693	0.4163	8.5603	0.9860	0.4677	59.6268
150	5	10	30	5	6.7484	21.9601	1.0501	0.3434	0.2675	0.4179	8.5664	0.9864	0.4693	59.6590
150	5	20	10	5	6.7860	21.9207	1.8761	0.3416	0.2551	0.4367	8.5996	0.9820	0.4627	58.4496
150	5	20	30	5	6.7791	21.8878	1.8784	0.3397	0.2576	0.4370	8.6090	0.9811	0.4653	58.2370

Table 1. Sweeping Parameters of the Random Forests Learner $K = N$ End-point-errors of the leave one out experiments on the whole dataset. The highlighted parameters represent the ones chosen in the paper. There end-point-errors do not change much as a result of changing the forest parameters.

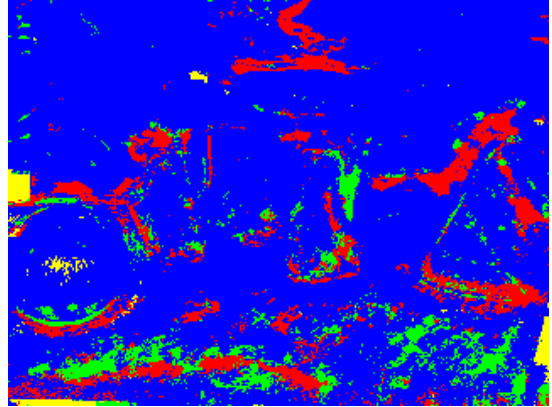
# Trees	Max Depth	Min Sample #	# Active Vars	2 Urban3		3 Urban2		4 RubberWhale		Ave. Testing Error
				Training Error	Testing Error	Training Error	Testing Error	Training Error	Testing Error	
10	10	10	2	28.98	26.98	29.71	21.99	28.81	22.76	23.91
10	10	10	5	26.61	23.27	26.52	17.80	25.51	25.42	22.16
10	10	10	10	25.89	21.95	25.72	18.43	25.35	31.79	24.06
10	10	50	2	29.28	25.07	28.13	19.49	29.56	19.25	21.27
10	10	50	5	26.43	22.39	26.31	18.20	25.66	24.23	21.61
10	10	50	10	25.95	23.76	26.19	19.86	25.74	27.96	23.86
10	20	10	2	13.64	30.51	13.53	23.91	13.98	38.82	31.08
10	20	10	5	11.57	28.62	11.03	22.35	11.36	41.60	30.86
10	20	10	10	9.98	28.06	10.38	22.59	10.41	41.32	30.66
10	20	50	2	17.28	30.20	16.31	23.69	16.19	41.19	31.69
10	20	50	5	13.70	28.65	14.12	22.97	14.32	41.16	30.92
10	20	50	10	13.11	29.12	12.45	22.79	13.33	43.29	31.73
50	10	10	2	27.64	23.94	28.68	17.42	26.56	20.40	20.59
50	10	10	5	25.45	22.07	25.60	15.93	25.08	24.29	20.77
50	10	10	10	25.45	21.39	25.42	16.94	25.11	27.25	21.86
50	10	50	2	28.17	22.75	27.25	16.62	28.23	21.02	20.13
50	10	50	5	25.63	21.27	25.57	16.36	25.51	22.42	20.02
50	10	50	10	25.67	22.09	25.61	17.36	25.26	26.48	21.98
50	20	10	2	11.75	25.34	11.94	18.49	12.58	34.38	26.07
50	20	10	5	10.29	24.21	9.86	18.10	10.20	37.26	26.52
50	20	10	10	9.17	23.75	8.96	17.70	9.24	37.38	26.28
50	20	50	2	15.26	25.61	14.81	19.11	14.90	35.90	26.87
50	20	50	5	12.61	24.41	13.04	18.43	12.78	36.77	26.54
50	20	50	10	11.50	24.40	11.17	18.17	11.67	37.12	26.57
100	10	10	2	27.61	23.35	28.27	17.08	26.68	20.10	20.18
100	10	10	5	25.50	21.71	25.33	16.13	25.15	23.46	20.43
100	10	10	10	25.39	21.11	25.42	16.46	25.08	27.12	21.57
100	10	50	2	28.11	22.47	27.20	16.52	28.29	21.79	20.26
100	10	50	5	25.58	21.22	25.59	16.01	25.31	24.01	20.42
100	10	50	10	25.72	21.53	25.51	16.99	25.24	25.57	21.36
100	20	10	2	11.67	24.99	11.59	17.84	12.38	32.89	25.24
100	20	10	5	10.27	23.80	9.80	17.49	10.22	36.11	25.8
100	20	10	10	9.05	23.42	8.83	17.42	9.09	36.92	25.92
100	20	50	2	15.03	25.19	14.89	18.26	14.95	34.46	25.97
100	20	50	5	12.43	24.08	12.78	17.66	12.90	35.66	25.8
100	20	50	10	11.33	23.95	10.90	17.52	11.41	37.07	26.18

Table 2. **Sweeping Parameters of the Random Forests Learner $K = 2$** Our meta-algorithm for predicting algorithm-suitability, based on appearance and motion, depends only on the corpus of training data, and has no need for parameter-tuning. The only available choice of parameters is in controlling the Random Forests learner itself, though all our experiments throughout the paper submission were performed with the settings indicated between the double-lines. Here, sweeping these parameters for alternative settings reveals only minor room for improvement (shown in bold).

Mayan 2



Image 1



Predicted Class Labels



Predicted Flow



Difference between Prediction and Ground Truth



Flow Lib Flow



Difference between FL and Ground Truth

Crates 2

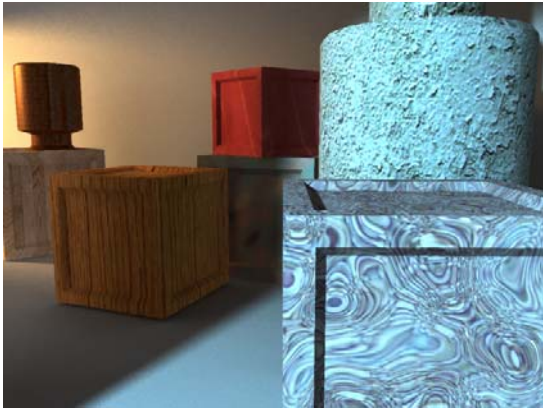
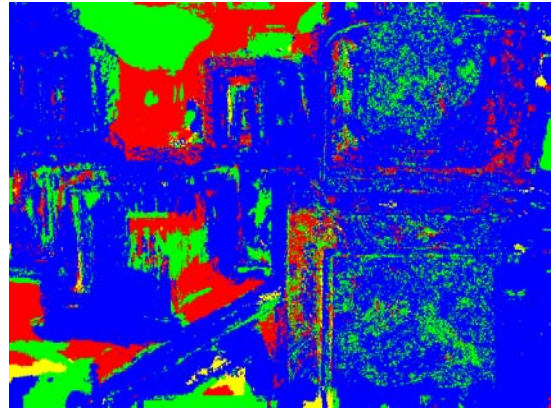


Image 1



Predicted Class Labels



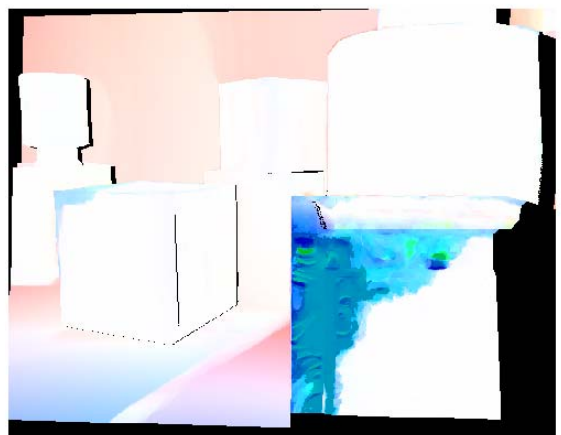
Predicted Flow



Difference between Prediction and Ground Truth



Flow Lib Flow



Difference between FL and Ground Truth