TABLE V: Summary of subject details.

	Sex	Age	Mass	Height
User 1	Male	26	60kg	173cm
User 2	Male	22	65kg	174cm
User 3	Female	21	54kg	159cm
User 4	Female	20	50kg	163cm
User 5	Male	23	63kg	170cm
User 6	Female	21	55kg	163cm

TABLE VI: Mean Number of time points for each task over all 5 takes per subject and average number of time points for each task over all 6 subjects and 5 tasks.

Task	Subject	Avg. Pts./Sub. & Task	Avg. Pts./Task
Up	1	386.8	407.1
	2	482.0	
	3	376.4	
	4	404.8	
	5	253.6	
	6	539.0	
Down	1	186.0	339.17
	2	480.8	
	3	296.0	
	4	365.4	
	5	200.6	
	6	506.2	
Walking	1	1637.6	1685.3
	2	1708.0	
	3	1712.0	
	4	1691.4	
	5	1578.4	
	6	1784.4	
Jogging	1	1664.0	1681.77
	2	1671.0	
	3	1754.2	
	4	1644.2	
	5	1556.4	
	6	1800.8	
Running	1	328.0	300.0
	2	246.8	
	3	348.6	
	4	224.8	
	5	205.4	
	6	446.4	

TABLE VII: Settings for Genetic Programming. The values for migrations and generations *per* migration were reduced to 100 each when performing the analysis on models fit to a subset of data.

Elitism	1
Population	101/subpopulation (707 total)
Subpopulations	7
Migrations	1,000
Generations	1,000 *per* migration (1,000,000 total)
Mutation	10% (x2 chances per selection)
Crossover	80%
Trainers	8
Predictors	20
Predictor Pop. Size	20% of Dataset
Max # Graph Nodes	40
Fitness Metric	Mean Squared Error: $\frac{1}{n}\sum_{i=1}^{n}(\hat{Y}_i - Y_i)^2$
Language	$+, -, *, /, exp, abs, sin, cos, tan$

$$gyr_z = sin(2sin(acc_x)) \left(\frac{-7.873 + e^{gyr_x} + gyr_y}{(7.873 + e^{gyr_y})} * 0.226347 * e^{-gyr_x} \right) * sin(acc_x)) + \frac{sin^2(acc_x)}{-3.997 - gyr_y} + \frac{4.418 * (gyr_y - 0.226347 * e^{-gyr_x} * sin(acc_x))}{7.873 + e^{gyr_y}} \tag{1}$$

Fig. 11: Example expression generated with symbolic regression. The expression generated is for Subject 6's second take on the running task (see figure 1).

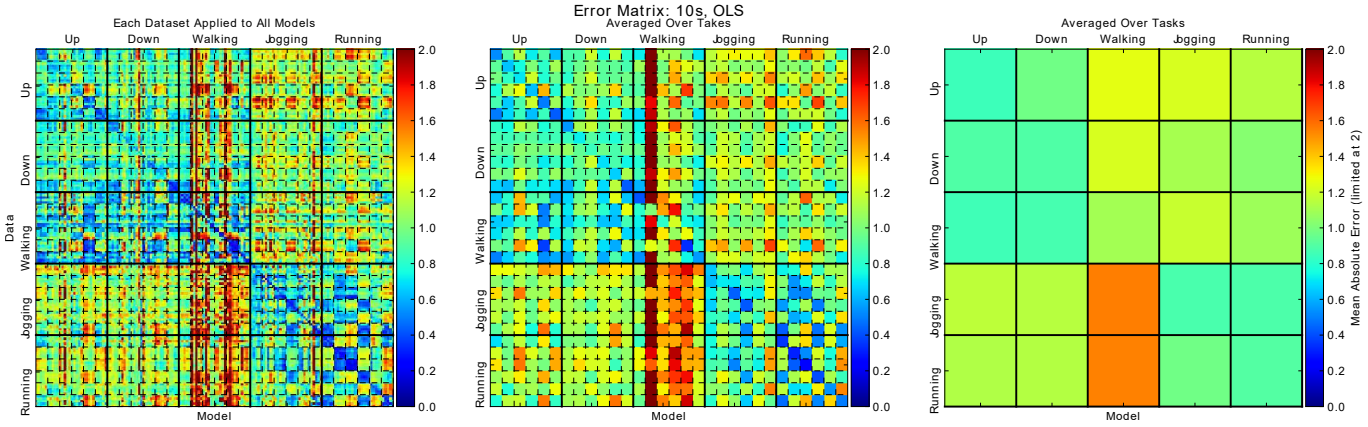

Fig. 12: Error Matrix of OLS regression fit to 10s of data.

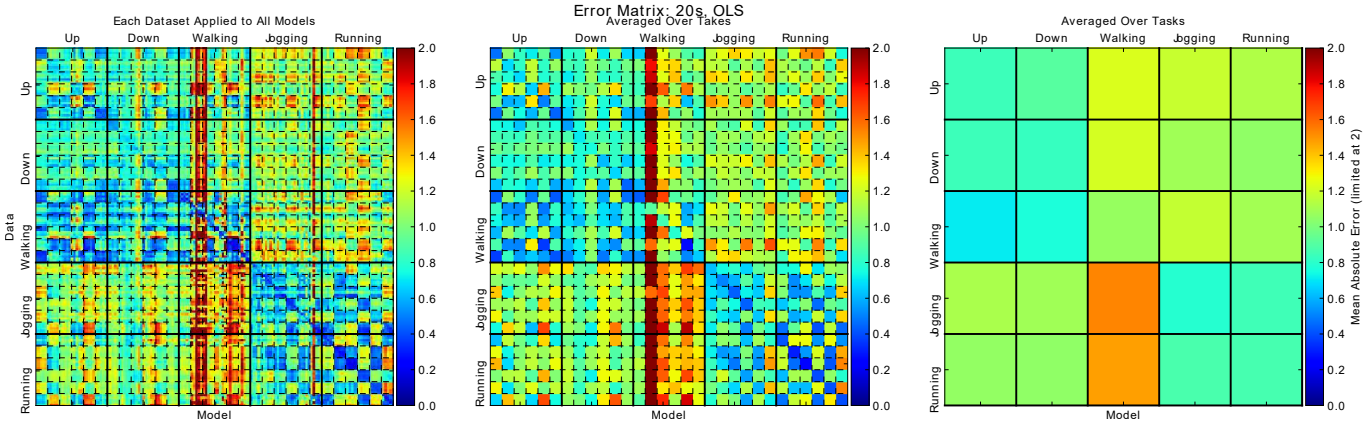

Fig. 13: Error matrix of OLS regression fit to 20s of data.

TABLE VIII: Mean/Median fitness (p-value from single model classifier). Top ensemble fit to all data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	50.381/0.41 (0.5)	0.444/0.46 (0.002)	0.444/0.45 (0.003)	0.464/0.475 (0.0)	0.462/0.495 (0.0)	0.468/0.49 (0.0)	0.462/0.485 (0.0)	0.471/0.485 (0.0)	0.466/0.47 (0.0)	0.474/0.49 (0.0)
10	0.564/0.64 (0.5)	0.616/0.695 (0.012)	0.615/0.66 (0.022)	0.628/0.675 (0.005)	0.627/0.67 (0.008)	0.64/0.68 (0.001)	0.631/0.685 (0.003)	0.632/0.695 (0.002)	0.642/0.69 (0.001)	0.64/0.68 (0.001)
15	0.654/0.735 (0.5)	0.693/0.765 (0.045)	0.695/0.765 (0.029)	0.709/0.78 (0.009)	0.705/0.775 (0.01)	0.721/0.785 (0.003)	0.711/0.765 (0.009)	0.715/0.76 (0.004)	0.717/0.785 (0.003)	0.719/0.78 (0.003)
20	0.71/0.81 (0.5)	0.746/0.845 (0.051)	0.746/0.82 (0.052)	0.76/0.85 (0.01)	0.755/0.84 (0.013)	0.767/0.86 (0.006)	0.765/0.86 (0.004)	0.762/0.855 (0.007)	0.766/0.85 (0.003)	0.768/0.85 (0.005)
25	0.742/0.85 (0.5)	0.782/0.895 (0.026)	0.782/0.87 (0.032)	0.796/0.9 (0.005)	0.79/0.89 (0.009)	0.794/0.905 (0.006)	0.795/0.89 (0.01)	0.805/0.895 (0.001)	0.798/0.885 (0.003)	0.804/0.905 (0.001)
30	0.772/0.87 (0.5)	0.801/0.9 (0.064)	0.807/0.905 (0.028)	0.815/0.915 (0.011)	0.812/0.92 (0.02)	0.817/0.925 (0.011)	0.818/0.925 (0.008)	0.825/0.92 (0.003)	0.823/0.925 (0.003)	0.823/0.925 (0.004)
35	0.793/0.9 (0.5)	0.82/0.93 (0.098)	0.823/0.935 (0.116)	0.831/0.94 (0.044)	0.834/0.935 (0.042)	0.84/0.945 (0.028)	0.839/0.95 (0.033)	0.842/0.96 (0.016)	0.84/0.94 (0.023)	0.844/0.955 (0.011)
40	0.81/0.915 (0.5)	0.834/0.95 (0.07)	0.838/0.95 (0.092)	0.848/0.96 (0.024)	0.85/0.96 (0.03)	0.853/0.96 (0.012)	0.85/0.955 (0.016)	0.853/0.96 (0.011)	0.853/0.96 (0.008)	0.856/0.965 (0.006)
45	0.823/0.94 (0.5)	0.848/0.965 (0.044)	0.845/0.96 (0.068)	0.859/0.97 (0.015)	0.86/0.965 (0.028)	0.863/0.98 (0.007)	0.863/0.97 (0.008)	0.864/0.97 (0.009)	0.863/0.97 (0.01)	0.866/0.975 (0.005)
50	0.831/0.95 (0.5)	0.86/0.975 (0.069)	0.859/0.96 (0.081)	0.865/0.98 (0.038)	0.867/0.97 (0.075)	0.871/0.975 (0.027)	0.871/0.98 (0.043)	0.871/0.98 (0.013)	0.874/0.98 (0.022)	0.874/0.99 (0.009)
55	0.843/0.96 (0.5)	0.867/0.98 (0.162)	0.868/0.98 (0.082)	0.873/0.98 (0.042)	0.876/0.985 (0.048)	0.879/0.98 (0.089)	0.881/0.99 (0.032)	0.881/0.98 (0.026)	0.882/0.99 (0.021)	0.881/0.99 (0.032)
60	0.848/0.97 (0.5)	0.875/0.99 (0.043)	0.871/0.98 (0.072)	0.879/0.985 (0.032)	0.881/0.99 (0.035)	0.887/0.99 (0.01)	0.884/0.99 (0.014)	0.884/0.99 (0.016)	0.885/0.99 (0.018)	0.889/0.99 (0.01)
65	0.86/0.975 (0.5)	0.881/0.99 (0.077)	0.878/0.99 (0.102)	0.887/0.99 (0.055)	0.888/0.99 (0.072)	0.89/0.99 (0.042)	0.894/0.99 (0.041)	0.89/0.99 (0.033)	0.891/0.99 (0.025)	0.892/0.99 (0.057)
70	0.865/0.98 (0.5)	0.884/0.99 (0.084)	0.882/0.99 (0.156)	0.89/1.0 (0.028)	0.891/0.99 (0.057)	0.899/0.99 (0.063)	0.897/1.0 (0.034)	0.898/1.0 (0.022)	0.894/0.99 (0.044)	0.898/0.99 (0.035)
75	0.869/0.98 (0.5)	0.884/0.99 (0.094)	0.89/0.995 (0.067)	0.897/0.99 (0.048)	0.898/0.99 (0.054)	0.901/1.0 (0.029)	0.901/1.0 (0.022)	0.902/1.0 (0.018)	0.899/1.0 (0.026)	0.903/1.0 (0.009)
80	0.875/0.99 (0.5)	0.89/1.0 (0.119)	0.888/1.0 (0.136)	0.899/1.0 (0.047)	0.9/1.0 (0.075)	0.906/1.0 (0.029)	0.908/1.0 (0.038)	0.905/1.0 (0.025)	0.903/1.0 (0.047)	0.908/1.0 (0.037)
85	0.881/0.99 (0.5)	0.893/1.0 (0.13)	0.893/1.0 (0.164)	0.901/1.0 (0.054)	0.904/0.99 (0.202)	0.91/1.0 (0.066)	0.907/1.0 (0.101)	0.904/1.0 (0.145)	0.904/1.0 (0.102)	0.909/1.0 (0.064)
90	0.882/0.99 (0.5)	0.896/1.0 (0.171)	0.897/0.995 (0.177)	0.908/1.0 (0.031)	0.909/1.0 (0.061)	0.911/1.0 (0.017)	0.908/1.0 (0.025)	0.911/1.0 (0.02)	0.905/1.0 (0.071)	0.911/1.0 (0.019)
95	0.88/0.995 (0.5)	0.901/1.0 (0.095)	0.897/1.0 (0.078)	0.907/1.0 (0.112)	0.909/1.0 (0.17)	0.912/1.0 (0.06)	0.915/1.0 (0.086)	0.911/1.0 (0.035)	0.913/1.0 (0.116)	0.914/1.0 (0.063)
100	0.887/1.0 (0.5)	0.905/1.0 (0.101)	0.9/1.0 (0.239)	0.91/1.0 (0.035)	0.914/1.0 (0.144)	0.915/1.0 (0.083)	0.917/1.0 (0.094)	0.915/1.0 (0.043)	0.917/1.0 (0.069)	0.915/1.0 (0.115)
105	0.893/1.0 (0.5)	0.905/1.0 (0.21)	0.901/1.0 (0.126)	0.914/1.0 (0.058)	0.917/1.0 (0.079)	0.917/1.0 (0.05)	0.923/1.0 (0.035)	0.915/1.0 (0.037)	0.916/1.0 (0.11)	0.922/1.0 (0.029)
110	0.894/1.0 (0.5)	0.908/1.0 (0.357)	0.907/1.0 (0.329)	0.912/1.0 (0.12)	0.915/1.0 (0.183)	0.917/1.0 (0.155)	0.922/1.0 (0.161)	0.919/1.0 (0.193)	0.919/1.0 (0.161)	0.926/1.0 (0.055)
115	0.895/1.0 (0.5)	0.908/1.0 (0.135)	0.905/1.0 (0.186)	0.915/1.0 (0.088)	0.92/1.0 (0.066)	0.921/1.0 (0.035)	0.923/1.0 (0.045)	0.919/1.0 (0.066)	0.919/1.0 (0.046)	0.924/1.0 (0.024)
120	0.9/1.0 (0.5)	0.911/1.0 (0.256)	0.909/1.0 (0.329)	0.914/1.0 (0.087)	0.921/1.0 (0.113)	0.923/1.0 (0.035)	0.924/1.0 (0.084)	0.923/1.0 (0.056)	0.924/1.0 (0.099)	0.924/1.0 (0.059)

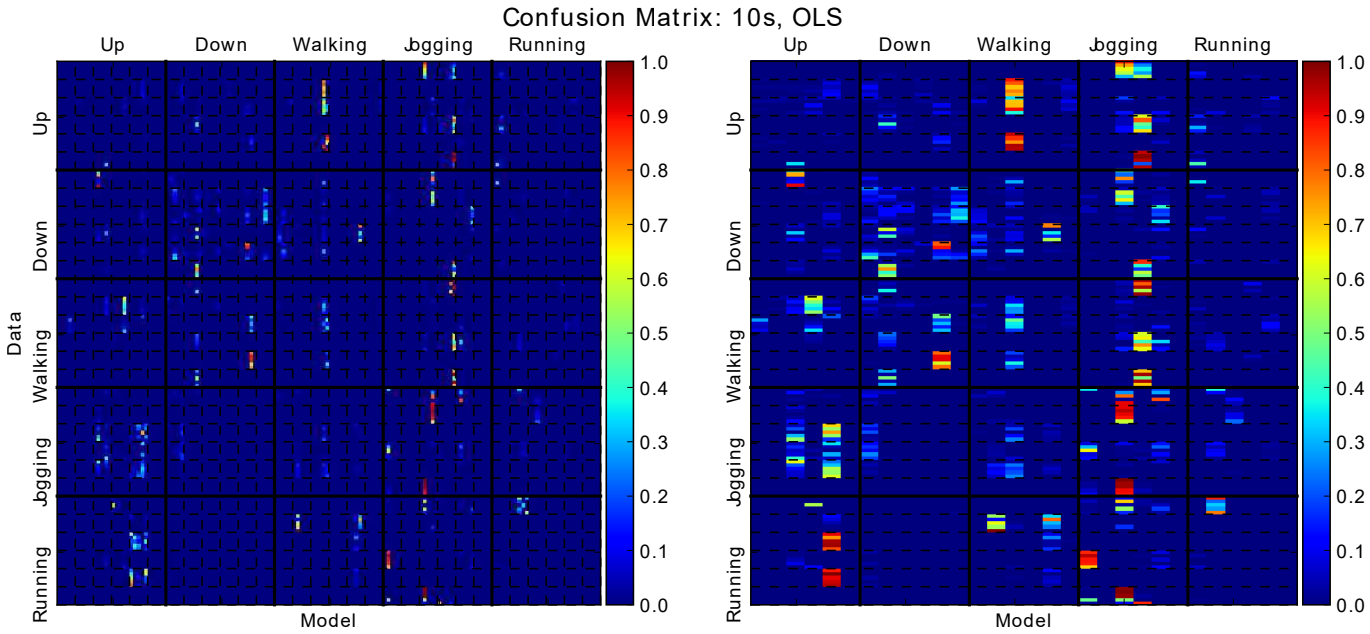

Fig. 14: Classification confusion matrix for linear models obtained with OLS regression and fit to 10s of data.

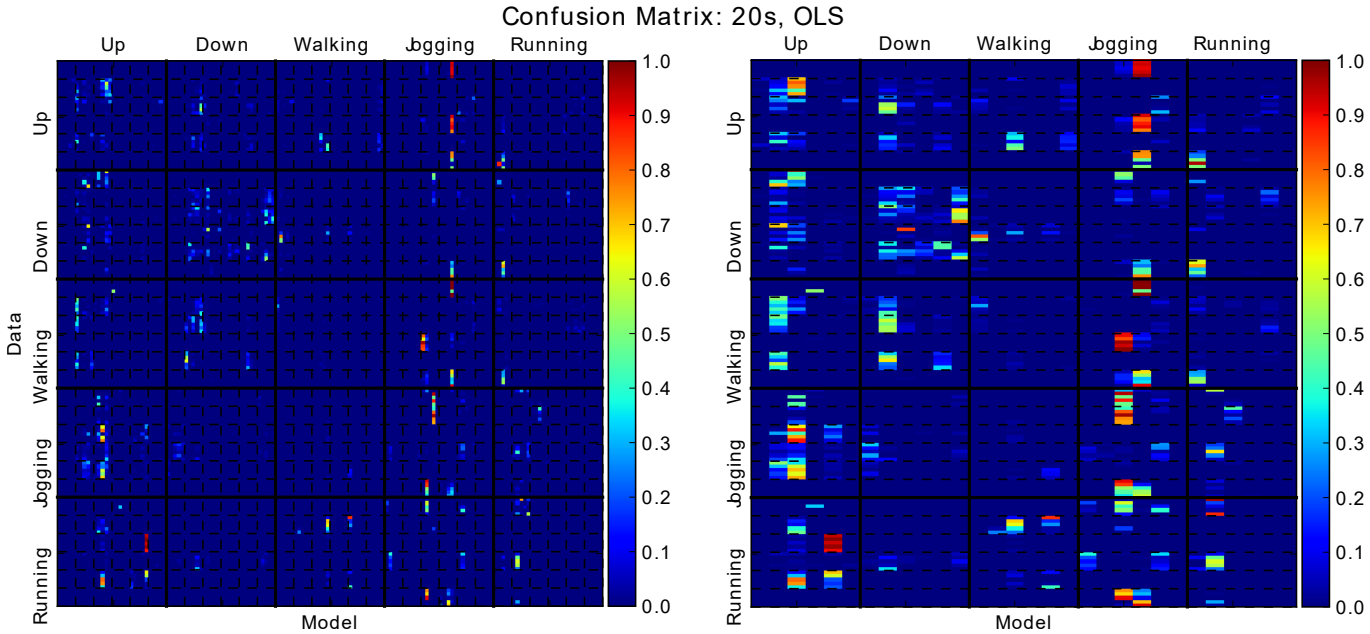

Fig. 15: Classification confusion matrix for linear models obtained with OLS regression and fit to 20s of data.

TABLE IX: Mean/Median fitness (p-value from single model classifier). Top ensemble fit to 10s of data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.224/0.195 (0.5)	0.269/0.225 (0.077)	0.274/0.225 (0.075)	0.291/0.25 (0.02)	0.284/0.24 (0.029)	0.301/0.275 (0.006)	0.289/0.27 (0.018)	0.3/0.27 (0.006)	0.295/0.27 (0.017)	0.296/0.275 (0.01)
10	0.326/0.305 (0.5)	0.367/0.34 (0.16)	0.368/0.305 (0.134)	0.382/0.365 (0.114)	0.39/0.395 (0.051)	0.393/0.37 (0.037)	0.392/0.385 (0.044)	0.399/0.39 (0.027)	0.394/0.41 (0.037)	0.4/0.395 (0.039)
15	0.376/0.355 (0.5)	0.402/0.385 (0.377)	0.415/0.33 (0.188)	0.43/0.39 (0.117)	0.434/0.435 (0.081)	0.441/0.465 (0.056)	0.447/0.44 (0.035)	0.452/0.49 (0.034)	0.442/0.455 (0.056)	0.445/0.43 (0.05)
20	0.397/0.375 (0.5)	0.427/0.41 (0.293)	0.443/0.365 (0.119)	0.46/0.46 (0.06)	0.462/0.485 (0.052)	0.474/0.485 (0.025)	0.471/0.475 (0.027)	0.474/0.505 (0.027)	0.478/0.515 (0.021)	0.479/0.515 (0.019)
25	0.42/0.42 (0.5)	0.449/0.41 (0.271)	0.465/0.375 (0.104)	0.483/0.46 (0.063)	0.479/0.54 (0.065)	0.489/0.49 (0.035)	0.491/0.48 (0.033)	0.495/0.55 (0.035)	0.494/0.515 (0.029)	0.496/0.555 (0.03)
30	0.437/0.42 (0.5)	0.463/0.45 (0.287)	0.476/0.395 (0.134)	0.497/0.48 (0.076)	0.491/0.52 (0.086)	0.508/0.54 (0.035)	0.5/0.51 (0.046)	0.509/0.585 (0.029)	0.501/0.545 (0.051)	0.512/0.56 (0.028)
35	0.452/0.395 (0.5)	0.475/0.44 (0.275)	0.486/0.385 (0.154)	0.507/0.52 (0.075)	0.505/0.555 (0.084)	0.516/0.57 (0.045)	0.515/0.56 (0.043)	0.517/0.6 (0.044)	0.519/0.635 (0.034)	0.513/0.63 (0.055)
40	0.459/0.455 (0.5)	0.48/0.45 (0.275)	0.502/0.41 (0.1)	0.509/0.54 (0.102)	0.51/0.55 (0.078)	0.521/0.615 (0.044)	0.52/0.57 (0.047)	0.524/0.65 (0.039)	0.523/0.655 (0.043)	0.52/0.575 (0.042)
45	0.466/0.45 (0.5)	0.488/0.46 (0.247)	0.505/0.43 (0.106)	0.512/0.585 (0.122)	0.512/0.58 (0.11)	0.523/0.61 (0.058)	0.525/0.6 (0.047)	0.528/0.61 (0.033)	0.525/0.61 (0.044)	0.526/0.595 (0.043)
50	0.473/0.44 (0.5)	0.492/0.465 (0.261)	0.501/0.415 (0.172)	0.527/0.595 (0.07)	0.521/0.6 (0.112)	0.525/0.645 (0.09)	0.528/0.62 (0.06)	0.536/0.62 (0.046)	0.535/0.655 (0.051)	0.534/0.65 (0.052)
55	0.477/0.48 (0.5)	0.494/0.5 (0.251)	0.509/0.44 (0.146)	0.532/0.62 (0.055)	0.525/0.63 (0.093)	0.533/0.685 (0.055)	0.532/0.625 (0.065)	0.53/0.655 (0.063)	0.536/0.69 (0.038)	0.536/0.575 (0.036)
60	0.484/0.48 (0.5)	0.497/0.5 (0.328)	0.507/0.43 (0.184)	0.526/0.625 (0.132)	0.528/0.6 (0.125)	0.535/0.67 (0.074)	0.535/0.63 (0.062)	0.538/0.685 (0.064)	0.535/0.685 (0.061)	0.538/0.665 (0.06)
65	0.489/0.5 (0.5)	0.503/0.525 (0.231)	0.521/0.46 (0.12)	0.534/0.62 (0.086)	0.528/0.595 (0.116)	0.539/0.69 (0.052)	0.537/0.63 (0.06)	0.537/0.705 (0.051)	0.537/0.69 (0.057)	0.534/0.635 (0.069)
70	0.492/0.525 (0.5)	0.5/0.465 (0.25)	0.515/0.465 (0.125)	0.533/0.66 (0.073)	0.531/0.605 (0.091)	0.534/0.7 (0.061)	0.539/0.67 (0.043)	0.539/0.71 (0.032)	0.537/0.67 (0.048)	0.539/0.64 (0.037)
75	0.497/0.515 (0.5)	0.503/0.495 (0.291)	0.524/0.48 (0.153)	0.536/0.675 (0.086)	0.532/0.61 (0.094)	0.541/0.7 (0.061)	0.538/0.64 (0.075)	0.54/0.74 (0.067)	0.535/0.67 (0.084)	0.539/0.675 (0.057)
80	0.501/0.49 (0.5)	0.508/0.495 (0.261)	0.527/0.49 (0.131)	0.538/0.675 (0.101)	0.533/0.635 (0.139)	0.54/0.695 (0.087)	0.538/0.645 (0.084)	0.538/0.675 (0.084)	0.54/0.67 (0.07)	0.537/0.63 (0.087)
85	0.5/0.49 (0.5)	0.508/0.54 (0.242)	0.52/0.485 (0.154)	0.538/0.695 (0.075)	0.532/0.675 (0.11)	0.539/0.7 (0.072)	0.54/0.665 (0.066)	0.543/0.72 (0.039)	0.54/0.685 (0.052)	0.539/0.66 (0.062)
90	0.5/0.525 (0.5)	0.509/0.5 (0.244)	0.525/0.53 (0.102)	0.536/0.71 (0.103)	0.533/0.64 (0.094)	0.541/0.715 (0.07)	0.54/0.615 (0.05)	0.54/0.71 (0.051)	0.539/0.675 (0.048)	0.541/0.66 (0.052)
95	0.503/0.495 (0.5)	0.507/0.525 (0.352)	0.525/0.515 (0.139)	0.541/0.7 (0.111)	0.535/0.675 (0.141)	0.541/0.725 (0.106)	0.543/0.645 (0.09)	0.545/0.76 (0.08)	0.541/0.725 (0.092)	0.541/0.64 (0.088)
100	0.507/0.52 (0.5)	0.51/0.53 (0.287)	0.527/0.515 (0.168)	0.541/0.71 (0.139)	0.535/0.645 (0.115)	0.544/0.735 (0.094)	0.54/0.66 (0.099)	0.543/0.775 (0.092)	0.539/0.735 (0.104)	0.537/0.65 (0.089)
105	0.509/0.565 (0.5)	0.509/0.52 (0.288)	0.526/0.51 (0.142)	0.539/0.695 (0.069)	0.537/0.66 (0.095)	0.544/0.7 (0.056)	0.543/0.71 (0.049)	0.543/0.76 (0.05)	0.541/0.715 (0.064)	0.542/0.685 (0.06)
110	0.507/0.55 (0.5)	0.51/0.545 (0.332)	0.526/0.495 (0.151)	0.538/0.715 (0.081)	0.536/0.625 (0.105)	0.543/0.76 (0.08)	0.545/0.7 (0.069)	0.542/0.77 (0.062)	0.541/0.685 (0.076)	0.539/0.635 (0.091)
115	0.509/0.495 (0.5)	0.511/0.5 (0.195)	0.53/0.57 (0.133)	0.54/0.765 (0.048)	0.534/0.6 (0.082)	0.543/0.735 (0.065)	0.539/0.665 (0.072)	0.545/0.81 (0.054)	0.541/0.745 (0.055)	0.542/0.695 (0.064)
120	0.511/0.53 (0.5)	0.513/0.575 (0.342)	0.531/0.59 (0.145)	0.544/0.745 (0.098)	0.534/0.64 (0.129)	0.545/0.74 (0.107)	0.544/0.695 (0.089)	0.542/0.735 (0.076)	0.542/0.725 (0.067)	0.543/0.67 (0.088)

TABLE X: Mean/Median fitness (p-value from single model classifier). Top ensemble fit to 20s of data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.268/0.23 (0.5)	0.31/0.265 (0.03)	0.304/0.26 (0.066)	0.326/0.29 (0.008)	0.321/0.3 (0.023)	0.324/0.29 (0.023)	0.323/0.3 (0.02)	0.325/0.295 (0.016)	0.323/0.31 (0.013)	0.322/0.29 (0.022)
10	0.385/0.345 (0.5)	0.436/0.39 (0.055)	0.435/0.43 (0.048)	0.44/0.44 (0.046)	0.442/0.44 (0.038)	0.45/0.45 (0.029)	0.444/0.44 (0.034)	0.443/0.445 (0.039)	0.44/0.455 (0.04)	0.448/0.465 (0.026)
15	0.449/0.445 (0.5)	0.496/0.47 (0.076)	0.495/0.51 (0.062)	0.51/0.545 (0.033)	0.507/0.535 (0.036)	0.512/0.515 (0.026)	0.514/0.53 (0.023)	0.516/0.555 (0.023)	0.503/0.54 (0.049)	0.508/0.555 (0.038)
20	0.492/0.5 (0.5)	0.534/0.53 (0.082)	0.536/0.535 (0.078)	0.548/0.565 (0.036)	0.548/0.59 (0.038)	0.553/0.57 (0.029)	0.549/0.545 (0.032)	0.556/0.57 (0.02)	0.547/0.575 (0.038)	0.547/0.58 (0.045)
25	0.529/0.58 (0.5)	0.566/0.58 (0.107)	0.564/0.575 (0.114)	0.571/0.575 (0.062)	0.582/0.595 (0.042)	0.582/0.61 (0.048)	0.585/0.6 (0.036)	0.585/0.615 (0.031)	0.577/0.595 (0.063)	0.582/0.605 (0.046)
30	0.556/0.565 (0.5)	0.583/0.59 (0.146)	0.588/0.61 (0.111)	0.595/0.675 (0.07)	0.597/0.64 (0.067)	0.602/0.61 (0.044)	0.604/0.645 (0.046)	0.604/0.65 (0.036)	0.594/0.66 (0.084)	0.601/0.665 (0.057)
35	0.57/0.595 (0.5)	0.601/0.63 (0.1)	0.604/0.635 (0.088)	0.603/0.65 (0.085)	0.615/0.655 (0.049)	0.618/0.66 (0.034)	0.617/0.67 (0.042)	0.619/0.705 (0.04)	0.611/0.63 (0.049)	0.617/0.695 (0.038)
40	0.589/0.62 (0.5)	0.613/0.64 (0.142)	0.61/0.67 (0.175)	0.617/0.7 (0.102)	0.629/0.68 (0.059)	0.63/0.705 (0.05)	0.628/0.685 (0.08)	0.634/0.7 (0.047)	0.624/0.7 (0.091)	0.627/0.7 (0.072)
45	0.602/0.675 (0.5)	0.62/0.68 (0.137)	0.624/0.695 (0.108)	0.628/0.71 (0.07)	0.635/0.685 (0.067)	0.638/0.71 (0.046)	0.64/0.755 (0.051)	0.641/0.7 (0.044)	0.633/0.71 (0.072)	0.636/0.73 (0.062)
50	0.612/0.695 (0.5)	0.625/0.705 (0.227)	0.629/0.745 (0.19)	0.639/0.77 (0.095)	0.643/0.71 (0.087)	0.65/0.74 (0.063)	0.645/0.73 (0.084)	0.644/0.71 (0.096)	0.639/0.78 (0.112)	0.64/0.745 (0.104)
55	0.618/0.675 (0.5)	0.633/0.71 (0.205)	0.637/0.73 (0.145)	0.646/0.76 (0.078)	0.647/0.725 (0.088)	0.652/0.74 (0.059)	0.65/0.74 (0.074)	0.657/0.785 (0.052)	0.64/0.755 (0.13)	0.651/0.75 (0.089)
60	0.628/0.685 (0.5)	0.648/0.755 (0.171)	0.636/0.725 (0.222)	0.651/0.765 (0.086)	0.66/0.75 (0.079)	0.657/0.755 (0.069)	0.664/0.77 (0.066)	0.659/0.8 (0.08)	0.651/0.755 (0.124)	0.654/0.765 (0.094)
65	0.63/0.71 (0.5)	0.644/0.77 (0.144)	0.647/0.765 (0.125)	0.655/0.765 (0.065)	0.656/0.76 (0.093)	0.662/0.8 (0.052)	0.669/0.785 (0.046)	0.664/0.8 (0.05)	0.656/0.805 (0.097)	0.659/0.79 (0.07)
70	0.639/0.705 (0.5)	0.644/0.76 (0.309)	0.651/0.805 (0.217)	0.66/0.8 (0.153)	0.662/0.78 (0.164)	0.66/0.81 (0.133)	0.663/0.79 (0.162)	0.668/0.805 (0.117)	0.657/0.82 (0.191)	0.663/0.8 (0.136)
75	0.643/0.745 (0.5)	0.655/0.795 (0.178)	0.66/0.805 (0.114)	0.662/0.835 (0.091)	0.665/0.79 (0.103)	0.673/0.85 (0.072)	0.673/0.805 (0.068)	0.671/0.82 (0.068)	0.664/0.835 (0.104)	0.669/0.835 (0.075)
80	0.649/0.755 (0.5)	0.657/0.82 (0.203)	0.655/0.83 (0.19)	0.67/0.82 (0.075)	0.671/0.81 (0.119)	0.67/0.815 (0.102)	0.676/0.855 (0.1)	0.67/0.84 (0.096)	0.665/0.845 (0.12)	0.668/0.82 (0.125)
85	0.652/0.75 (0.5)	0.661/0.82 (0.215)	0.661/0.85 (0.187)	0.67/0.85 (0.127)	0.671/0.825 (0.123)	0.671/0.82 (0.116)	0.678/0.85 (0.094)	0.675/0.865 (0.087)	0.666/0.845 (0.153)	0.67/0.865 (0.124)
90	0.655/0.755 (0.5)	0.664/0.825 (0.215)	0.665/0.85 (0.181)	0.666/0.835 (0.135)	0.676/0.82 (0.11)	0.678/0.85 (0.09)	0.678/0.86 (0.124)	0.674/0.85 (0.139)	0.672/0.85 (0.135)	0.673/0.84 (0.096)
95	0.659/0.805 (0.5)	0.663/0.825 (0.201)	0.662/0.875 (0.196)	0.674/0.875 (0.105)	0.679/0.825 (0.107)	0.679/0.885 (0.075)	0.686/0.875 (0.1)	0.683/0.87 (0.078)	0.668/0.895 (0.151)	0.675/0.865 (0.124)
100	0.657/0.82 (0.5)	0.669/0.84 (0.175)	0.67/0.87 (0.094)	0.67/0.85 (0.104)	0.676/0.855 (0.11)	0.678/0.865 (0.078)	0.686/0.87 (0.087)	0.682/0.86 (0.073)	0.673/0.88 (0.114)	0.677/0.875 (0.108)
105	0.67/0.8 (0.5)	0.671/0.86 (0.265)	0.672/0.9 (0.237)	0.678/0.865 (0.148)	0.679/0.845 (0.172)	0.684/0.875 (0.124)	0.687/0.9 (0.111)	0.682/0.88 (0.146)	0.675/0.88 (0.198)	0.681/0.87 (0.133)
110	0.671/0.82 (0.5)	0.67/0.87 (0.242)	0.668/0.87 (0.212)	0.678/0.895 (0.123)	0.682/0.86 (0.135)	0.684/0.89 (0.108)	0.685/0.885 (0.158)	0.687/0.91 (0.125)	0.67/0.89 (0.254)	0.68/0.905 (0.15)
115	0.671/0.815 (0.5)	0.673/0.875 (0.205)	0.673/0.92 (0.166)	0.677/0.885 (0.103)	0.685/0.87 (0.124)	0.682/0.86 (0.118)	0.684/0.87 (0.124)	0.685/0.885 (0.116)	0.676/0.9 (0.186)	0.683/0.9 (0.151)
120	0.671/0.815 (0.5)	0.672/0.9 (0.244)	0.673/0.92 (0.143)	0.681/0.875 (0.131)	0.687/0.865 (0.138)	0.686/0.905 (0.119)	0.694/0.9 (0.101)	0.688/0.91 (0.139)	0.681/0.91 (0.147)	0.683/0.9 (0.15)

TABLE XI: Mean/Median fitness (p-value from single model classifier). Random ensemble fit to all data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.346/0.335 (0.5)	0.41/0.4 (0.002)	0.411/0.42 (0.002)	0.431/0.44 (0.0)	0.433/0.42 (0.0)	0.442/0.455 (0.0)	0.447/0.465 (0.0)	0.457/0.455 (0.0)	0.452/0.455 (0.0)	0.455/0.44 (0.0)
10	0.511/0.525 (0.5)	0.572/0.585 (0.007)	0.579/0.61 (0.003)	0.607/0.63 (0.0)	0.602/0.615 (0.0)	0.616/0.655 (0.0)	0.611/0.635 (0.0)	0.618/0.655 (0.0)	0.619/0.645 (0.0)	0.625/0.65 (0.0)
15	0.596/0.615 (0.5)	0.66/0.695 (0.004)	0.666/0.69 (0.002)	0.684/0.73 (0.0)	0.689/0.74 (0.0)	0.692/0.755 (0.0)	0.697/0.76 (0.0)	0.707/0.77 (0.0)	0.702/0.77 (0.0)	0.707/0.75 (0.0)
20	0.659/0.685 (0.5)	0.717/0.785 (0.004)	0.723/0.79 (0.003)	0.743/0.82 (0.0)	0.743/0.79 (0.0)	0.744/0.81 (0.0)	0.75/0.815 (0.0)	0.754/0.82 (0.0)	0.756/0.83 (0.0)	0.761/0.83 (0.0)
25	0.696/0.76 (0.5)	0.753/0.815 (0.003)	0.751/0.84 (0.003)	0.774/0.85 (0.0)	0.777/0.855 (0.0)	0.786/0.87 (0.0)	0.782/0.865 (0.0)	0.787/0.865 (0.0)	0.788/0.88 (0.0)	0.798/0.875 (0.0)
30	0.725/0.81 (0.5)	0.781/0.86 (0.003)	0.781/0.865 (0.002)	0.805/0.89 (0.0)	0.8/0.91 (0.0)	0.814/0.9 (0.0)	0.807/0.9 (0.0)	0.818/0.92 (0.0)	0.817/0.9 (0.0)	0.818/0.91 (0.0)
35	0.753/0.825 (0.5)	0.8/0.88 (0.006)	0.804/0.89 (0.003)	0.82/0.915 (0.0)	0.818/0.925 (0.0)	0.829/0.91 (0.0)	0.827/0.925 (0.0)	0.837/0.935 (0.0)	0.831/0.92 (0.0)	0.838/0.93 (0.0)
40	0.768/0.835 (0.5)	0.817/0.91 (0.004)	0.817/0.91 (0.003)	0.837/0.94 (0.0)	0.833/0.93 (0.0)	0.847/0.94 (0.0)	0.844/0.94 (0.0)	0.851/0.96 (0.0)	0.846/0.945 (0.0)	0.857/0.96 (0.0)
45	0.785/0.865 (0.5)	0.826/0.92 (0.01)	0.828/0.92 (0.004)	0.849/0.95 (0.0)	0.848/0.945 (0.0)	0.855/0.96 (0.0)	0.853/0.955 (0.0)	0.861/0.955 (0.0)	0.861/0.96 (0.0)	0.865/0.96 (0.0)
50	0.796/0.875 (0.5)	0.839/0.94 (0.002)	0.841/0.945 (0.001)	0.856/0.95 (0.0)	0.857/0.96 (0.0)	0.863/0.97 (0.0)	0.866/0.965 (0.0)	0.873/0.97 (0.0)	0.868/0.965 (0.0)	0.869/0.965 (0.0)
55	0.804/0.9 (0.5)	0.847/0.94 (0.002)	0.853/0.95 (0.0)	0.864/0.97 (0.0)	0.865/0.97 (0.0)	0.873/0.97 (0.0)	0.874/0.97 (0.0)	0.878/0.97 (0.0)	0.88/0.975 (0.0)	0.88/0.98 (0.0)
60	0.817/0.915 (0.5)	0.85/0.955 (0.008)	0.856/0.96 (0.002)	0.871/0.975 (0.0)	0.871/0.97 (0.0)	0.878/0.975 (0.0)	0.879/0.97 (0.0)	0.887/0.98 (0.0)	0.888/0.985 (0.0)	0.89/0.99 (0.0)
65	0.822/0.92 (0.5)	0.857/0.96 (0.005)	0.864/0.965 (0.001)	0.883/0.98 (0.0)	0.873/0.98 (0.0)	0.886/0.98 (0.0)	0.888/0.98 (0.0)	0.889/0.98 (0.0)	0.888/0.99 (0.0)	0.891/0.99 (0.0)
70	0.831/0.93 (0.5)	0.865/0.97 (0.004)	0.872/0.97 (0.001)	0.884/0.99 (0.0)	0.882/0.99 (0.0)	0.889/0.985 (0.0)	0.89/0.98 (0.0)	0.897/0.99 (0.0)	0.895/0.985 (0.0)	0.896/0.99 (0.0)
75	0.837/0.935 (0.5)	0.876/0.98 (0.001)	0.873/0.98 (0.001)	0.887/0.99 (0.0)	0.886/0.98 (0.0)	0.898/0.99 (0.0)	0.9/0.99 (0.0)	0.9/0.99 (0.0)	0.897/0.99 (0.0)	0.901/0.995 (0.0)
80	0.837/0.94 (0.5)	0.881/0.975 (0.001)	0.882/0.97 (0.0)	0.891/0.99 (0.0)	0.892/0.99 (0.0)	0.9/0.99 (0.0)	0.9/0.99 (0.0)	0.903/0.99 (0.0)	0.903/1.0 (0.0)	0.904/1.0 (0.0)
85	0.847/0.945 (0.5)	0.879/0.98 (0.009)	0.885/0.98 (0.004)	0.897/0.99 (0.0)	0.896/0.99 (0.0)	0.904/0.99 (0.0)	0.9/0.995 (0.0)	0.906/0.99 (0.0)	0.907/1.0 (0.0)	0.909/1.0 (0.0)
90	0.849/0.94 (0.5)	0.882/0.98 (0.003)	0.887/0.98 (0.001)	0.9/0.995 (0.0)	0.899/0.99 (0.0)	0.906/0.995 (0.0)	0.907/0.995 (0.0)	0.912/1.0 (0.0)	0.909/1.0 (0.0)	0.914/1.0 (0.0)
95	0.852/0.955 (0.5)	0.885/0.985 (0.003)	0.891/0.99 (0.001)	0.901/0.99 (0.0)	0.9/0.99 (0.0)	0.908/1.0 (0.0)	0.905/1.0 (0.0)	0.912/1.0 (0.0)	0.913/1.0 (0.0)	0.914/1.0 (0.0)
100	0.858/0.96 (0.5)	0.89/0.99 (0.001)	0.893/0.99 (0.001)	0.903/1.0 (0.0)	0.903/0.99 (0.0)	0.909/1.0 (0.0)	0.908/1.0 (0.0)	0.91/1.0 (0.0)	0.914/1.0 (0.0)	0.912/1.0 (0.0)
105	0.86/0.96 (0.5)	0.892/0.99 (0.003)	0.895/0.99 (0.001)	0.902/1.0 (0.0)	0.909/1.0 (0.0)	0.912/1.0 (0.0)	0.913/1.0 (0.0)	0.918/1.0 (0.0)	0.917/1.0 (0.0)	0.922/1.0 (0.0)
110	0.857/0.96 (0.5)	0.894/0.99 (0.001)	0.895/0.99 (0.001)	0.908/1.0 (0.0)	0.907/1.0 (0.0)	0.913/1.0 (0.0)	0.915/1.0 (0.0)	0.917/1.0 (0.0)	0.919/1.0 (0.0)	0.919/1.0 (0.0)
115	0.863/0.96 (0.5)	0.894/0.99 (0.001)	0.896/0.99 (0.001)	0.91/1.0 (0.0)	0.91/1.0 (0.0)	0.918/1.0 (0.0)	0.918/1.0 (0.0)	0.92/1.0 (0.0)	0.92/1.0 (0.0)	0.92/1.0 (0.0)
120	0.865/0.96 (0.5)	0.898/0.99 (0.001)	0.9/0.99 (0.0)	0.912/1.0 (0.0)	0.913/1.0 (0.0)	0.918/1.0 (0.0)	0.919/1.0 (0.0)	0.921/1.0 (0.0)	0.92/1.0 (0.0)	0.924/1.0 (0.0)

TABLE XII: Mean/Median fitness (p-value from single model classifier). Random ensemble fit to 10s of data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.174/0.14 (0.5)	0.22/0.19 (0.014)	0.219/0.19 (0.022)	0.239/0.2 (0.005)	0.237/0.22 (0.004)	0.247/0.205 (0.002)	0.248/0.225 (0.001)	0.255/0.22 (0.002)	0.253/0.22 (0.002)	0.258/0.23 (0.001)
10	0.243/0.21 (0.5)	0.3/0.25 (0.031)	0.297/0.25 (0.021)	0.324/0.27 (0.008)	0.318/0.265 (0.009)	0.331/0.295 (0.006)	0.335/0.275 (0.002)	0.345/0.32 (0.001)	0.344/0.305 (0.002)	0.342/0.29 (0.003)
15	0.284/0.27 (0.5)	0.34/0.27 (0.039)	0.335/0.295 (0.092)	0.368/0.32 (0.009)	0.371/0.315 (0.008)	0.381/0.325 (0.006)	0.372/0.32 (0.012)	0.386/0.34 (0.007)	0.388/0.34 (0.004)	0.394/0.325 (0.005)
20	0.311/0.27 (0.5)	0.373/0.32 (0.031)	0.368/0.32 (0.045)	0.389/0.34 (0.026)	0.393/0.33 (0.015)	0.403/0.36 (0.013)	0.405/0.375 (0.011)	0.413/0.37 (0.011)	0.413/0.37 (0.008)	0.409/0.38 (0.017)
25	0.335/0.29 (0.5)	0.383/0.32 (0.097)	0.392/0.33 (0.052)	0.41/0.365 (0.026)	0.401/0.36 (0.041)	0.424/0.385 (0.023)	0.423/0.385 (0.02)	0.436/0.405 (0.008)	0.431/0.4 (0.015)	0.439/0.405 (0.011)
30	0.342/0.285 (0.5)	0.401/0.385 (0.046)	0.398/0.355 (0.058)	0.427/0.39 (0.012)	0.425/0.39 (0.022)	0.441/0.405 (0.01)	0.433/0.4 (0.019)	0.446/0.405 (0.01)	0.443/0.415 (0.015)	0.454/0.41 (0.007)
35	0.362/0.315 (0.5)	0.414/0.355 (0.063)	0.41/0.38 (0.118)	0.437/0.405 (0.04)	0.433/0.39 (0.043)	0.447/0.405 (0.025)	0.447/0.43 (0.026)	0.459/0.455 (0.016)	0.455/0.425 (0.023)	0.465/0.435 (0.017)
40	0.366/0.335 (0.5)	0.417/0.37 (0.074)	0.42/0.36 (0.063)	0.439/0.405 (0.039)	0.439/0.405 (0.037)	0.457/0.44 (0.019)	0.457/0.425 (0.022)	0.461/0.435 (0.025)	0.464/0.46 (0.016)	0.473/0.45 (0.012)
45	0.37/0.32 (0.5)	0.423/0.375 (0.073)	0.434/0.41 (0.047)	0.452/0.435 (0.031)	0.455/0.42 (0.025)	0.466/0.435 (0.015)	0.461/0.425 (0.027)	0.466/0.45 (0.025)	0.471/0.43 (0.02)	0.477/0.475 (0.017)
50	0.371/0.325 (0.5)	0.427/0.39 (0.076)	0.433/0.38 (0.047)	0.451/0.41 (0.03)	0.452/0.415 (0.025)	0.462/0.435 (0.022)	0.467/0.44 (0.015)	0.481/0.475 (0.007)	0.474/0.47 (0.016)	0.484/0.47 (0.009)
55	0.385/0.33 (0.5)	0.436/0.375 (0.099)	0.441/0.42 (0.069)	0.467/0.43 (0.027)	0.464/0.445 (0.029)	0.473/0.455 (0.021)	0.47/0.46 (0.032)	0.48/0.48 (0.026)	0.476/0.46 (0.029)	0.481/0.47 (0.028)
60	0.388/0.34 (0.5)	0.442/0.41 (0.072)	0.445/0.42 (0.058)	0.463/0.435 (0.038)	0.467/0.45 (0.026)	0.475/0.455 (0.026)	0.475/0.475 (0.028)	0.483/0.455 (0.02)	0.486/0.46 (0.016)	0.489/0.5 (0.018)
65	0.39/0.345 (0.5)	0.447/0.445 (0.077)	0.441/0.415 (0.102)	0.464/0.435 (0.046)	0.462/0.425 (0.053)	0.475/0.46 (0.034)	0.474/0.46 (0.037)	0.488/0.47 (0.022)	0.49/0.475 (0.016)	0.491/0.475 (0.023)
70	0.389/0.36 (0.5)	0.441/0.41 (0.118)	0.443/0.395 (0.099)	0.471/0.41 (0.026)	0.47/0.46 (0.028)	0.486/0.49 (0.019)	0.478/0.45 (0.029)	0.487/0.47 (0.021)	0.488/0.46 (0.022)	0.492/0.475 (0.019)
75	0.397/0.37 (0.5)	0.445/0.385 (0.113)	0.449/0.425 (0.093)	0.47/0.465 (0.048)	0.471/0.465 (0.048)	0.484/0.46 (0.026)	0.486/0.485 (0.024)	0.491/0.48 (0.023)	0.492/0.45 (0.022)	0.493/0.485 (0.026)
80	0.394/0.355 (0.5)	0.447/0.44 (0.08)	0.452/0.435 (0.069)	0.474/0.46 (0.03)	0.472/0.44 (0.033)	0.486/0.475 (0.022)	0.483/0.48 (0.023)	0.492/0.455 (0.02)	0.492/0.495 (0.017)	0.496/0.5 (0.019)
85	0.396/0.35 (0.5)	0.451/0.41 (0.083)	0.455/0.425 (0.065)	0.474/0.48 (0.037)	0.477/0.46 (0.032)	0.482/0.475 (0.037)	0.485/0.465 (0.027)	0.503/0.5 (0.015)	0.497/0.5 (0.023)	0.499/0.5 (0.023)
90	0.398/0.355 (0.5)	0.45/0.405 (0.084)	0.457/0.42 (0.071)	0.477/0.44 (0.034)	0.474/0.425 (0.041)	0.487/0.48 (0.027)	0.487/0.46 (0.028)	0.494/0.475 (0.027)	0.5/0.49 (0.015)	0.503/0.54 (0.018)
95	0.407/0.4 (0.5)	0.449/0.43 (0.144)	0.461/0.445 (0.07)	0.478/0.46 (0.05)	0.481/0.445 (0.039)	0.491/0.485 (0.034)	0.493/0.485 (0.021)	0.493/0.52 (0.037)	0.497/0.5 (0.026)	0.502/0.515 (0.027)
100	0.408/0.37 (0.5)	0.454/0.45 (0.115)	0.454/0.405 (0.138)	0.484/0.44 (0.038)	0.481/0.47 (0.051)	0.492/0.485 (0.03)	0.493/0.47 (0.027)	0.501/0.495 (0.022)	0.501/0.51 (0.028)	0.506/0.5 (0.022)
105	0.409/0.39 (0.5)	0.451/0.42 (0.162)	0.454/0.42 (0.13)	0.479/0.455 (0.053)	0.474/0.44 (0.078)	0.498/0.51 (0.026)	0.49/0.48 (0.041)	0.497/0.485 (0.037)	0.492/0.495 (0.053)	0.506/0.5 (0.021)
110	0.408/0.385 (0.5)	0.454/0.415 (0.131)	0.463/0.46 (0.089)	0.483/0.45 (0.036)	0.479/0.45 (0.05)	0.491/0.465 (0.034)	0.494/0.48 (0.026)	0.501/0.525 (0.025)	0.502/0.5 (0.022)	0.504/0.48 (0.025)
115	0.411/0.375 (0.5)	0.455/0.43 (0.134)	0.461/0.455 (0.1)	0.481/0.45 (0.051)	0.476/0.45 (0.066)	0.496/0.495 (0.028)	0.497/0.495 (0.026)	0.501/0.505 (0.03)	0.505/0.495 (0.018)	0.505/0.535 (0.031)
120	0.403/0.4 (0.5)	0.458/0.41 (0.09)	0.463/0.43 (0.063)	0.483/0.47 (0.034)	0.477/0.46 (0.047)	0.492/0.47 (0.032)	0.496/0.5 (0.022)	0.504/0.5 (0.017)	0.499/0.485 (0.027)	0.503/0.5 (0.027)

TABLE XIII: Mean/Median fitness (p-value from single model classifier). Random ensemble fit to 20s of data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.192/0.165 (0.5)	0.24/0.21 (0.005)	0.236/0.2 (0.018)	0.258/0.225 (0.001)	0.255/0.23 (0.003)	0.279/0.24 (0.0)	0.268/0.23 (0.001)	0.277/0.245 (0.0)	0.275/0.24 (0.0)	0.281/0.255 (0.0)
10	0.281/0.25 (0.5)	0.341/0.335 (0.012)	0.346/0.305 (0.01)	0.363/0.35 (0.002)	0.365/0.365 (0.002)	0.377/0.37 (0.001)	0.38/0.38 (0.001)	0.383/0.37 (0.0)	0.378/0.37 (0.001)	0.388/0.38 (0.0)
15	0.338/0.32 (0.5)	0.394/0.38 (0.028)	0.393/0.365 (0.034)	0.428/0.43 (0.001)	0.415/0.42 (0.006)	0.434/0.42 (0.001)	0.434/0.435 (0.001)	0.444/0.4 (0.0)	0.439/0.415 (0.001)	0.448/0.43 (0.0)
20	0.361/0.355 (0.5)	0.43/0.415 (0.011)	0.431/0.415 (0.008)	0.456/0.47 (0.001)	0.459/0.485 (0.001)	0.476/0.45 (0.0)	0.473/0.46 (0.0)	0.479/0.435 (0.0)	0.492/0.49 (0.0)	0.49/0.485 (0.0)
25	0.387/0.38 (0.5)	0.46/0.435 (0.009)	0.453/0.465 (0.01)	0.483/0.445 (0.001)	0.485/0.465 (0.001)	0.497/0.5 (0.0)	0.501/0.505 (0.0)	0.511/0.49 (0.0)	0.507/0.51 (0.0)	0.524/0.52 (0.0)
30	0.403/0.385 (0.5)	0.483/0.48 (0.003)	0.478/0.45 (0.006)	0.51/0.505 (0.0)	0.508/0.49 (0.0)	0.526/0.53 (0.0)	0.522/0.52 (0.0)	0.531/0.51 (0.0)	0.531/0.51 (0.0)	0.541/0.545 (0.0)
35	0.413/0.405 (0.5)	0.496/0.5 (0.003)	0.492/0.495 (0.005)	0.519/0.5 (0.0)	0.517/0.51 (0.0)	0.537/0.555 (0.0)	0.539/0.535 (0.0)	0.54/0.55 (0.0)	0.548/0.54 (0.0)	0.558/0.585 (0.0)
40	0.43/0.41 (0.5)	0.511/0.52 (0.003)	0.509/0.51 (0.004)	0.531/0.56 (0.001)	0.535/0.545 (0.0)	0.551/0.565 (0.0)	0.551/0.565 (0.0)	0.566/0.6 (0.0)	0.563/0.565 (0.0)	0.57/0.59 (0.0)
45	0.445/0.44 (0.5)	0.51/0.5 (0.019)	0.518/0.535 (0.007)	0.543/0.52 (0.001)	0.541/0.555 (0.001)	0.56/0.59 (0.0)	0.566/0.595 (0.0)	0.572/0.6 (0.0)	0.571/0.61 (0.0)	0.577/0.615 (0.0)
50	0.452/0.45 (0.5)	0.522/0.54 (0.01)	0.526/0.535 (0.007)	0.558/0.58 (0.0)	0.557/0.61 (0.0)	0.573/0.62 (0.0)	0.572/0.605 (0.0)	0.576/0.61 (0.0)	0.576/0.62 (0.0)	0.593/0.64 (0.0)
55	0.454/0.465 (0.5)	0.533/0.57 (0.004)	0.53/0.565 (0.005)	0.559/0.61 (0.0)	0.562/0.59 (0.0)	0.578/0.6 (0.0)	0.579/0.61 (0.0)	0.59/0.64 (0.0)	0.588/0.645 (0.0)	0.599/0.655 (0.0)
60	0.459/0.47 (0.5)	0.537/0.56 (0.004)	0.537/0.58 (0.003)	0.57/0.61 (0.0)	0.57/0.615 (0.0)	0.584/0.63 (0.0)	0.584/0.645 (0.0)	0.591/0.62 (0.0)	0.593/0.65 (0.0)	0.603/0.67 (0.0)
65	0.472/0.48 (0.5)	0.534/0.565 (0.014)	0.545/0.565 (0.007)	0.57/0.63 (0.001)	0.57/0.6 (0.0)	0.588/0.67 (0.0)	0.59/0.64 (0.0)	0.596/0.64 (0.0)	0.597/0.65 (0.0)	0.608/0.68 (0.0)
70	0.475/0.47 (0.5)	0.551/0.57 (0.004)	0.548/0.57 (0.006)	0.579/0.645 (0.0)	0.579/0.635 (0.0)	0.598/0.67 (0.0)	0.599/0.66 (0.0)	0.603/0.66 (0.0)	0.609/0.71 (0.0)	0.613/0.695 (0.0)
75	0.474/0.485 (0.5)	0.551/0.59 (0.004)	0.553/0.58 (0.004)	0.582/0.63 (0.0)	0.583/0.64 (0.0)	0.6/0.69 (0.0)	0.599/0.655 (0.0)	0.61/0.675 (0.0)	0.612/0.67 (0.0)	0.616/0.685 (0.0)
80	0.477/0.49 (0.5)	0.554/0.565 (0.005)	0.554/0.59 (0.004)	0.585/0.645 (0.0)	0.581/0.64 (0.0)	0.603/0.67 (0.0)	0.6/0.695 (0.0)	0.617/0.7 (0.0)	0.615/0.685 (0.0)	0.62/0.7 (0.0)
85	0.484/0.48 (0.5)	0.561/0.605 (0.004)	0.562/0.61 (0.003)	0.587/0.64 (0.0)	0.588/0.67 (0.0)	0.607/0.69 (0.0)	0.604/0.675 (0.0)	0.622/0.71 (0.0)	0.615/0.695 (0.0)	0.623/0.715 (0.0)
90	0.487/0.48 (0.5)	0.563/0.61 (0.004)	0.564/0.635 (0.003)	0.591/0.665 (0.0)	0.593/0.67 (0.0)	0.613/0.685 (0.0)	0.606/0.69 (0.0)	0.62/0.715 (0.0)	0.622/0.71 (0.0)	0.63/0.735 (0.0)
95	0.488/0.51 (0.5)	0.563/0.605 (0.004)	0.563/0.62 (0.004)	0.595/0.665 (0.0)	0.592/0.645 (0.0)	0.61/0.685 (0.0)	0.616/0.69 (0.0)	0.621/0.72 (0.0)	0.628/0.73 (0.0)	0.635/0.74 (0.0)
100	0.49/0.495 (0.5)	0.569/0.62 (0.003)	0.565/0.615 (0.005)	0.6/0.665 (0.0)	0.6/0.695 (0.0)	0.615/0.695 (0.0)	0.616/0.7 (0.0)	0.625/0.74 (0.0)	0.618/0.71 (0.0)	0.635/0.735 (0.0)
105	0.489/0.49 (0.5)	0.569/0.62 (0.002)	0.568/0.63 (0.002)	0.602/0.68 (0.0)	0.604/0.69 (0.0)	0.616/0.7 (0.0)	0.614/0.68 (0.0)	0.629/0.735 (0.0)	0.629/0.745 (0.0)	0.64/0.74 (0.0)
110	0.49/0.51 (0.5)	0.576/0.64 (0.001)	0.574/0.6 (0.002)	0.601/0.665 (0.0)	0.601/0.67 (0.0)	0.623/0.73 (0.0)	0.616/0.7 (0.0)	0.635/0.73 (0.0)	0.626/0.735 (0.0)	0.637/0.765 (0.0)
115	0.495/0.495 (0.5)	0.577/0.645 (0.002)	0.571/0.625 (0.004)	0.607/0.69 (0.0)	0.601/0.68 (0.0)	0.618/0.71 (0.0)	0.623/0.71 (0.0)	0.635/0.75 (0.0)	0.63/0.745 (0.0)	0.638/0.76 (0.0)
120	0.496/0.525 (0.5)	0.574/0.64 (0.003)	0.576/0.62 (0.002)	0.604/0.69 (0.0)	0.6/0.68 (0.0)	0.622/0.725 (0.0)	0.62/0.72 (0.0)	0.635/0.77 (0.0)	0.628/0.73 (0.0)	0.644/0.775 (0.0)

TABLE XIV: Mean/Median fitness (p-value from single model classifier). Mixed ensemble fit to all data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.368/0.36 (0.5)	0.421/0.42 (0.01)	0.433/0.455 (0.001)	0.446/0.45 (0.0)	0.45/0.44 (0.0)	0.455/0.46 (0.0)	0.456/0.475 (0.0)	0.468/0.48 (0.0)	0.469/0.49 (0.0)	0.468/0.48 (0.0)
10	0.531/0.55 (0.5)	0.585/0.6 (0.017)	0.591/0.61 (0.011)	0.606/0.635 (0.002)	0.611/0.645 (0.001)	0.625/0.67 (0.0)	0.624/0.655 (0.0)	0.631/0.68 (0.0)	0.632/0.68 (0.0)	0.638/0.68 (0.0)
15	0.627/0.66 (0.5)	0.678/0.75 (0.014)	0.677/0.735 (0.014)	0.699/0.755 (0.002)	0.704/0.79 (0.001)	0.704/0.775 (0.001)	0.702/0.76 (0.001)	0.714/0.77 (0.0)	0.714/0.775 (0.0)	0.717/0.77 (0.0)
20	0.681/0.745 (0.5)	0.733/0.81 (0.009)	0.731/0.805 (0.012)	0.749/0.84 (0.001)	0.749/0.825 (0.001)	0.755/0.845 (0.0)	0.757/0.845 (0.0)	0.758/0.83 (0.0)	0.764/0.855 (0.0)	0.767/0.855 (0.0)
25	0.72/0.78 (0.5)	0.767/0.835 (0.01)	0.769/0.855 (0.006)	0.779/0.865 (0.001)	0.782/0.865 (0.001)	0.794/0.895 (0.0)	0.797/0.88 (0.0)	0.798/0.9 (0.0)	0.795/0.88 (0.0)	0.797/0.88 (0.0)
30	0.751/0.82 (0.5)	0.786/0.89 (0.023)	0.794/0.89 (0.015)	0.814/0.91 (0.001)	0.811/0.9 (0.002)	0.815/0.915 (0.0)	0.817/0.915 (0.0)	0.823/0.925 (0.0)	0.817/0.925 (0.0)	0.816/0.92 (0.0)
35	0.773/0.87 (0.5)	0.813/0.91 (0.021)	0.81/0.91 (0.013)	0.825/0.92 (0.001)	0.828/0.94 (0.001)	0.83/0.92 (0.0)	0.831/0.92 (0.001)	0.839/0.94 (0.0)	0.838/0.935 (0.0)	0.841/0.94 (0.0)
40	0.791/0.89 (0.5)	0.826/0.93 (0.028)	0.834/0.935 (0.007)	0.843/0.945 (0.001)	0.841/0.93 (0.003)	0.847/0.955 (0.001)	0.845/0.95 (0.001)	0.852/0.955 (0.0)	0.851/0.955 (0.0)	0.855/0.96 (0.0)
45	0.809/0.9 (0.5)	0.834/0.94 (0.05)	0.84/0.94 (0.015)	0.857/0.96 (0.001)	0.851/0.96 (0.003)	0.863/0.965 (0.0)	0.854/0.96 (0.002)	0.862/0.965 (0.0)	0.863/0.97 (0.0)	0.866/0.97 (0.0)
50	0.81/0.91 (0.5)	0.846/0.95 (0.01)	0.853/0.95 (0.002)	0.865/0.96 (0.0)	0.865/0.965 (0.0)	0.871/0.97 (0.0)	0.872/0.98 (0.0)	0.877/0.98 (0.0)	0.876/0.97 (0.0)	0.88/0.98 (0.0)
55	0.824/0.92 (0.5)	0.859/0.96 (0.007)	0.858/0.965 (0.006)	0.875/0.97 (0.0)	0.872/0.98 (0.001)	0.876/0.98 (0.0)	0.881/0.985 (0.0)	0.877/0.975 (0.0)	0.879/0.98 (0.0)	0.886/0.99 (0.0)
60	0.832/0.93 (0.5)	0.866/0.97 (0.014)	0.863/0.97 (0.009)	0.875/0.98 (0.001)	0.873/0.97 (0.002)	0.884/0.98 (0.0)	0.88/0.99 (0.0)	0.889/0.98 (0.0)	0.891/0.99 (0.0)	0.892/0.98 (0.0)
65	0.836/0.93 (0.5)	0.871/0.97 (0.013)	0.87/0.98 (0.009)	0.886/0.98 (0.001)	0.885/0.98 (0.0)	0.891/0.99 (0.0)	0.89/0.99 (0.0)	0.89/0.99 (0.0)	0.893/0.99 (0.0)	0.896/0.99 (0.0)
70	0.848/0.94 (0.5)	0.875/0.98 (0.015)	0.878/0.98 (0.014)	0.886/0.98 (0.003)	0.889/0.985 (0.001)	0.893/0.99 (0.0)	0.897/0.99 (0.0)	0.897/0.99 (0.0)	0.898/0.99 (0.0)	0.902/0.99 (0.0)
75	0.849/0.94 (0.5)	0.88/0.98 (0.005)	0.88/0.98 (0.003)	0.892/0.99 (0.0)	0.896/0.99 (0.0)	0.898/0.99 (0.0)	0.897/0.99 (0.0)	0.905/1.0 (0.0)	0.903/1.0 (0.0)	0.906/0.99 (0.0)
80	0.852/0.96 (0.5)	0.885/0.985 (0.004)	0.887/0.985 (0.007)	0.896/0.99 (0.001)	0.898/0.99 (0.001)	0.905/0.99 (0.0)	0.903/0.99 (0.0)	0.907/1.0 (0.0)	0.904/1.0 (0.0)	0.909/1.0 (0.0)
85	0.859/0.965 (0.5)	0.89/0.99 (0.007)	0.89/0.99 (0.005)	0.901/0.99 (0.001)	0.904/1.0 (0.0)	0.908/1.0 (0.0)	0.904/1.0 (0.0)	0.91/1.0 (0.0)	0.907/1.0 (0.0)	0.911/1.0 (0.0)
90	0.869/0.97 (0.5)	0.893/0.99 (0.046)	0.889/0.99 (0.023)	0.906/1.0 (0.001)	0.903/1.0 (0.001)	0.911/1.0 (0.0)	0.911/1.0 (0.0)	0.911/1.0 (0.001)	0.912/1.0 (0.0)	0.917/1.0 (0.0)
95	0.872/0.98 (0.5)	0.895/0.99 (0.05)	0.9/0.99 (0.017)	0.908/1.0 (0.005)	0.907/0.99 (0.01)	0.915/1.0 (0.001)	0.915/1.0 (0.0)	0.914/1.0 (0.001)	0.914/1.0 (0.001)	0.918/1.0 (0.0)
100	0.873/0.965 (0.5)	0.895/0.99 (0.049)	0.899/1.0 (0.005)	0.912/1.0 (0.0)	0.911/1.0 (0.001)	0.913/1.0 (0.0)	0.913/1.0 (0.0)	0.921/1.0 (0.0)	0.917/1.0 (0.0)	0.919/1.0 (0.0)
105	0.874/0.98 (0.5)	0.903/1.0 (0.009)	0.902/0.99 (0.013)	0.908/1.0 (0.003)	0.906/1.0 (0.003)	0.917/1.0 (0.0)	0.917/1.0 (0.0)	0.921/1.0 (0.0)	0.921/1.0 (0.0)	0.923/1.0 (0.0)
110	0.879/0.97 (0.5)	0.904/0.995 (0.01)	0.905/1.0 (0.005)	0.916/1.0 (0.001)	0.915/1.0 (0.001)	0.919/1.0 (0.0)	0.919/1.0 (0.0)	0.92/1.0 (0.0)	0.925/1.0 (0.0)	0.924/1.0 (0.0)
115	0.876/0.98 (0.5)	0.905/0.99 (0.04)	0.909/1.0 (0.005)	0.914/1.0 (0.001)	0.916/1.0 (0.0)	0.924/1.0 (0.0)	0.917/1.0 (0.0)	0.921/1.0 (0.0)	0.926/1.0 (0.0)	0.928/1.0 (0.0)
120	0.878/0.98 (0.5)	0.903/0.99 (0.029)	0.91/1.0 (0.003)	0.917/1.0 (0.0)	0.918/1.0 (0.0)	0.925/1.0 (0.0)	0.923/1.0 (0.0)	0.928/1.0 (0.0)	0.924/1.0 (0.0)	0.928/1.0 (0.0)

TABLE XV: Mean/Median fitness (p-value from single model classifier). Mixed ensemble fit to 10s of data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.201/0.18 (0.5)	0.242/0.225 (0.035)	0.238/0.23 (0.107)	0.252/0.225 (0.047)	0.255/0.23 (0.018)	0.259/0.24 (0.026)	0.26/0.24 (0.017)	0.268/0.23 (0.013)	0.267/0.245 (0.013)	0.27/0.27 (0.005)
10	0.288/0.275 (0.5)	0.324/0.29 (0.15)	0.328/0.32 (0.086)	0.347/0.31 (0.045)	0.343/0.325 (0.064)	0.356/0.335 (0.013)	0.354/0.33 (0.025)	0.359/0.335 (0.023)	0.361/0.33 (0.017)	0.367/0.35 (0.014)
15	0.328/0.28 (0.5)	0.366/0.335 (0.174)	0.376/0.37 (0.08)	0.393/0.38 (0.042)	0.386/0.34 (0.063)	0.398/0.4 (0.033)	0.401/0.36 (0.027)	0.409/0.385 (0.021)	0.408/0.405 (0.017)	0.409/0.42 (0.022)
20	0.363/0.335 (0.5)	0.402/0.37 (0.143)	0.399/0.37 (0.166)	0.416/0.41 (0.131)	0.42/0.395 (0.084)	0.432/0.43 (0.046)	0.425/0.405 (0.073)	0.436/0.445 (0.037)	0.432/0.43 (0.054)	0.435/0.435 (0.043)
25	0.371/0.33 (0.5)	0.416/0.415 (0.092)	0.418/0.38 (0.089)	0.432/0.385 (0.071)	0.437/0.41 (0.043)	0.449/0.435 (0.021)	0.448/0.435 (0.027)	0.447/0.455 (0.031)	0.452/0.44 (0.024)	0.454/0.49 (0.023)
30	0.396/0.365 (0.5)	0.433/0.405 (0.153)	0.44/0.45 (0.143)	0.453/0.445 (0.077)	0.445/0.445 (0.123)	0.461/0.485 (0.055)	0.454/0.465 (0.089)	0.468/0.47 (0.044)	0.467/0.48 (0.043)	0.473/0.485 (0.043)
35	0.401/0.405 (0.5)	0.442/0.41 (0.111)	0.446/0.42 (0.106)	0.458/0.44 (0.071)	0.46/0.465 (0.079)	0.467/0.475 (0.055)	0.465/0.45 (0.075)	0.474/0.5 (0.048)	0.474/0.505 (0.046)	0.478/0.51 (0.034)
40	0.418/0.39 (0.5)	0.447/0.435 (0.275)	0.455/0.45 (0.179)	0.467/0.455 (0.13)	0.467/0.48 (0.14)	0.476/0.505 (0.102)	0.475/0.49 (0.094)	0.486/0.53 (0.071)	0.484/0.505 (0.073)	0.485/0.515 (0.069)
45	0.422/0.425 (0.5)	0.457/0.41 (0.178)	0.463/0.455 (0.134)	0.472/0.495 (0.116)	0.477/0.49 (0.082)	0.483/0.505 (0.064)	0.479/0.525 (0.085)	0.486/0.53 (0.068)	0.492/0.53 (0.044)	0.489/0.555 (0.064)
50	0.431/0.405 (0.5)	0.462/0.43 (0.202)	0.464/0.46 (0.213)	0.478/0.475 (0.128)	0.481/0.47 (0.114)	0.488/0.52 (0.091)	0.491/0.545 (0.08)	0.498/0.52 (0.052)	0.492/0.495 (0.075)	0.496/0.57 (0.073)
55	0.441/0.43 (0.5)	0.462/0.43 (0.31)	0.469/0.47 (0.245)	0.487/0.51 (0.135)	0.482/0.485 (0.167)	0.489/0.48 (0.106)	0.494/0.55 (0.102)	0.499/0.505 (0.089)	0.494/0.55 (0.108)	0.502/0.54 (0.075)
60	0.434/0.395 (0.5)	0.465/0.455 (0.219)	0.476/0.475 (0.145)	0.49/0.51 (0.082)	0.486/0.515 (0.109)	0.491/0.535 (0.097)	0.499/0.56 (0.059)	0.497/0.565 (0.072)	0.5/0.57 (0.057)	0.498/0.58 (0.076)
65	0.443/0.41 (0.5)	0.47/0.44 (0.266)	0.477/0.445 (0.21)	0.49/0.495 (0.135)	0.494/0.535 (0.107)	0.5/0.54 (0.088)	0.499/0.555 (0.093)	0.503/0.585 (0.09)	0.503/0.575 (0.079)	0.502/0.55 (0.096)
70	0.447/0.435 (0.5)	0.474/0.48 (0.26)	0.482/0.47 (0.179)	0.494/0.505 (0.132)	0.497/0.54 (0.104)	0.502/0.56 (0.098)	0.502/0.555 (0.094)	0.503/0.57 (0.1)	0.505/0.54 (0.09)	0.507/0.585 (0.076)
75	0.447/0.43 (0.5)	0.475/0.44 (0.235)	0.479/0.47 (0.199)	0.495/0.515 (0.109)	0.498/0.53 (0.092)	0.501/0.55 (0.098)	0.499/0.565 (0.108)	0.509/0.59 (0.064)	0.504/0.55 (0.09)	0.513/0.585 (0.058)
80	0.451/0.42 (0.5)	0.474/0.43 (0.276)	0.49/0.49 (0.155)	0.492/0.47 (0.16)	0.494/0.505 (0.146)	0.507/0.595 (0.089)	0.5/0.585 (0.123)	0.505/0.58 (0.111)	0.511/0.61 (0.069)	0.511/0.55 (0.077)
85	0.454/0.42 (0.5)	0.478/0.44 (0.259)	0.486/0.485 (0.199)	0.499/0.515 (0.14)	0.499/0.525 (0.127)	0.505/0.555 (0.097)	0.504/0.55 (0.127)	0.51/0.615 (0.09)	0.508/0.565 (0.103)	0.514/0.57 (0.068)
90	0.454/0.42 (0.5)	0.484/0.45 (0.221)	0.485/0.49 (0.234)	0.498/0.48 (0.141)	0.497/0.545 (0.169)	0.507/0.575 (0.106)	0.506/0.56 (0.127)	0.511/0.565 (0.088)	0.509/0.57 (0.109)	0.514/0.61 (0.085)
95	0.461/0.475 (0.5)	0.476/0.455 (0.385)	0.49/0.49 (0.223)	0.505/0.545 (0.126)	0.503/0.54 (0.145)	0.509/0.55 (0.111)	0.51/0.56 (0.111)	0.51/0.555 (0.111)	0.515/0.57 (0.088)	0.517/0.63 (0.085)
100	0.46/0.425 (0.5)	0.481/0.475 (0.338)	0.49/0.5 (0.23)	0.502/0.53 (0.165)	0.503/0.54 (0.146)	0.507/0.55 (0.144)	0.515/0.585 (0.087)	0.512/0.57 (0.124)	0.513/0.575 (0.108)	0.519/0.57 (0.078)
105	0.467/0.445 (0.5)	0.485/0.48 (0.311)	0.492/0.465 (0.241)	0.499/0.48 (0.204)	0.505/0.52 (0.177)	0.513/0.585 (0.125)	0.513/0.585 (0.119)	0.519/0.59 (0.1)	0.513/0.555 (0.118)	0.521/0.575 (0.086)
110	0.464/0.43 (0.5)	0.487/0.485 (0.279)	0.494/0.53 (0.223)	0.509/0.515 (0.121)	0.507/0.545 (0.132)	0.511/0.59 (0.121)	0.507/0.555 (0.15)	0.515/0.575 (0.094)	0.516/0.575 (0.094)	0.519/0.57 (0.086)
115	0.463/0.415 (0.5)	0.485/0.46 (0.281)	0.492/0.485 (0.216)	0.505/0.52 (0.152)	0.504/0.555 (0.161)	0.513/0.57 (0.107)	0.512/0.565 (0.118)	0.515/0.605 (0.111)	0.513/0.6 (0.116)	0.521/0.575 (0.078)
120	0.465/0.415 (0.5)	0.484/0.465 (0.318)	0.493/0.465 (0.224)	0.501/0.525 (0.194)0	.506/0.55 (0.159)	0.515/0.56 (0.11)	0.513/0.565 (0.113)	0.517/0.6 (0.106)	0.518/0.6 (0.093)	0.517/0.585 (0.113)

TABLE XVI: Mean/Median fitness (p-value from single model classifier). Mixed ensemble fit to 20s of data.

Time points/Voters	1	2	3	4	5	6	7	8	9	10
5	0.219/0.18 (0.5)	0.261/0.24 (0.018)	0.259/0.22 (0.038)	0.275/0.24 (0.011)	0.28/0.24 (0.005)	0.287/0.25 (0.003)	0.282/0.24 (0.004)	0.294/0.25 (0.002)	0.295/0.265 (0.001)	0.301/0.275 (0.001)
10	0.316/0.29 (0.5)	0.366/0.35 (0.038)	0.366/0.355 (0.039)	0.387/0.355 (0.01)	0.387/0.37 (0.009)	0.4/0.39 (0.003)	0.398/0.4 (0.003)	0.404/0.37 (0.004)	0.41/0.395 (0.001)	0.411/0.42 (0.001)
15	0.366/0.34 (0.5)	0.429/0.41 (0.016)	0.427/0.415 (0.02)	0.451/0.43 (0.002)	0.451/0.455 (0.002)	0.454/0.45 (0.002)	0.459/0.44 (0.001)	0.462/0.49 (0.001)	0.461/0.455 (0.001)	0.473/0.455 (0.0)
20	0.415/0.415 (0.5)	0.464/0.475 (0.047)	0.466/0.49 (0.037)	0.488/0.49 (0.009)	0.492/0.5 (0.006)	0.499/0.515 (0.003)	0.505/0.525 (0.002)	0.504/0.535 (0.002)	0.5/0.525 (0.004)	0.512/0.525 (0.001)
25	0.438/0.455 (0.5)	0.489/0.505 (0.044)	0.492/0.52 (0.032)	0.513/0.555 (0.006)	0.518/0.525 (0.005)	0.526/0.535 (0.003)	0.524/0.55 (0.003)	0.527/0.54 (0.003)	0.529/0.53 (0.002)	0.542/0.56 (0.001)
30	0.463/0.47 (0.5)	0.512/0.55 (0.04)	0.515/0.535 (0.037)	0.537/0.58 (0.007)	0.531/0.575 (0.013)	0.553/0.595 (0.001)	0.548/0.59 (0.002)	0.553/0.605 (0.002)	0.555/0.61 (0.001)	0.556/0.595 (0.002)
35	0.476/0.5 (0.5)	0.529/0.565 (0.036)	0.536/0.6 (0.018)	0.554/0.58 (0.005)	0.546/0.595 (0.01)	0.564/0.65 (0.002)	0.564/0.585 (0.002)	0.566/0.65 (0.001)	0.564/0.63 (0.002)	0.578/0.68 (0.0)
40	0.487/0.5 (0.5)	0.542/0.535 (0.027)	0.543/0.58 (0.029)	0.569/0.615 (0.004)	0.566/0.64 (0.004)	0.58/0.64 (0.001)	0.576/0.65 (0.001)	0.588/0.655 (0.0)	0.58/0.655 (0.001)	0.583/0.645 (0.001)
45	0.495/0.515 (0.5)	0.556/0.595 (0.015)	0.546/0.58 (0.033)	0.58/0.65 (0.002)	0.573/0.64 (0.003)	0.584/0.65 (0.001)	0.583/0.655 (0.001)	0.602/0.7 (0.0)	0.595/0.695 (0.0)	0.6/0.71 (0.0)
50	0.512/0.56 (0.5)	0.561/0.615 (0.033)	0.564/0.62 (0.029)	0.586/0.665 (0.004)	0.583/0.65 (0.005)	0.598/0.695 (0.001)	0.593/0.665 (0.002)	0.601/0.695 (0.001)	0.598/0.665 (0.001)	0.61/0.71 (0.0)
55	0.514/0.56 (0.5)	0.57/0.65 (0.017)	0.578/0.63 (0.008)	0.593/0.69 (0.002)	0.591/0.69 (0.002)	0.6/0.69 (0.001)	0.605/0.695 (0.001)	0.608/0.71 (0.0)	0.611/0.735 (0.0)	0.611/0.74 (0.0)
60	0.525/0.555 (0.5)	0.574/0.64 (0.029)	0.58/0.65 (0.018)	0.599/0.67 (0.003)	0.598/0.685 (0.003)	0.612/0.71 (0.001)	0.607/0.715 (0.001)	0.618/0.72 (0.0)	0.624/0.74 (0.0)	0.62/0.725 (0.0)
65	0.523/0.555 (0.5)	0.575/0.64 (0.029)	0.582/0.68 (0.016)	0.613/0.71 (0.001)	0.605/0.69 (0.002)	0.616/0.73 (0.0)	0.614/0.725 (0.001)	0.623/0.75 (0.0)	0.624/0.755 (0.0)	0.634/0.765 (0.0)
70	0.532/0.57 (0.5)	0.588/0.65 (0.018)	0.59/0.67 (0.014)	0.606/0.7 (0.003)	0.61/0.725 (0.002)	0.618/0.735 (0.001)	0.617/0.725 (0.001)	0.625/0.755 (0.0)	0.63/0.765 (0.0)	0.631/0.76 (0.0)
75	0.53/0.555 (0.5)	0.599/0.715 (0.005)	0.593/0.68 (0.01)	0.617/0.725 (0.001)	0.612/0.73 (0.001)	0.626/0.735 (0.0)	0.625/0.75 (0.0)	0.635/0.74 (0.0)	0.632/0.78 (0.0)	0.634/0.76 (0.0)
80	0.536/0.56 (0.5)	0.598/0.69 (0.009)	0.595/0.69 (0.013)	0.614/0.725 (0.002)	0.622/0.735 (0.001)	0.631/0.76 (0.0)	0.628/0.755 (0.0)	0.637/0.765 (0.0)	0.639/0.775 (0.0)	0.632/0.765 (0.0)
85	0.549/0.61 (0.5)	0.597/0.695 (0.028)	0.6/0.71 (0.024)	0.623/0.73 (0.002)	0.618/0.715 (0.004)	0.629/0.75 (0.001)	0.633/0.77 (0.001)	0.64/0.775 (0.0)	0.64/0.79 (0.0)	0.642/0.8 (0.0)
90	0.551/0.615 (0.5)	0.607/0.69 (0.014)	0.601/0.7 (0.022)	0.621/0.74 (0.003)	0.623/0.735 (0.002)	0.634/0.76 (0.0)	0.636/0.76 (0.0)	0.644/0.78 (0.0)	0.639/0.775 (0.0)	0.646/0.82 (0.0)
95	0.549/0.585 (0.5)	0.603/0.695 (0.013)	0.611/0.72 (0.007)	0.628/0.735 (0.001)	0.626/0.745 (0.001)	0.639/0.77 (0.0)	0.632/0.74 (0.0)	0.646/0.785 (0.0)	0.642/0.805 (0.0)	0.649/0.795 (0.0)
100	0.554/0.59 (0.5)	0.61/0.72 (0.013)	0.613/0.71 (0.01)	0.626/0.76 (0.002)	0.631/0.76 (0.001)	0.637/0.79 (0.0)	0.641/0.78 (0.0)	0.642/0.805 (0.0)	0.648/0.8 (0.0)	0.649/0.805 (0.0)
105	0.556/0.6 (0.5)	0.605/0.72 (0.018)	0.607/0.695 (0.019)	0.631/0.76 (0.001)	0.635/0.76 (0.001)	0.64/0.77 (0.0)	0.646/0.805 (0.0)	0.648/0.81 (0.0)	0.65/0.79 (0.0)	0.65/0.805 (0.0)
110	0.552/0.59 (0.5)	0.604/0.71 (0.016)	0.619/0.71 (0.005)	0.637/0.745 (0.001)	0.629/0.75 (0.001)	0.645/0.81 (0.0)	0.642/0.785 (0.0)	0.646/0.81 (0.0)	0.652/0.8 (0.0)	0.656/0.825 (0.0)
115	0.562/0.59 (0.5)	0.609/0.71 (0.019)	0.619/0.73 (0.009)	0.635/0.76 (0.001)	0.638/0.75 (0.001)	0.648/0.795 (0.0)	0.651/0.795 (0.0)	0.648/0.79 (0.0)	0.649/0.795 (0.0)	0.655/0.82 (0.0)
120	0.566/0.615 (0.5)	0.615/0.73 (0.016)	0.611/0.72 (0.025)	0.637/0.77 (0.002)	0.639/0.765 (0.001)	0.643/0.795 (0.0)	0.647/0.795 (0.0)	0.652/0.815 (0.0)	0.66/0.83 (0.0)	0.658/0.83 (0.0)

TABLE XVII: Classification Accuracy for top ensemble fit to all data. Overall Accuracy: 0.866733333333 Task Accuracy: 0.916666666667 Walking Like 0.990333333333 Running like 0.9995 Subject Accuracy: 0.904933333333

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.96 ± 0.031	0.934 ± 0.073	0.666 ± 0.092	0.884 ± 0.092	0.566 ± 0.182	0.882 ± 0.129	0.864 ± 0.059
Down	0.932 ± 0.05	0.862 ± 0.075	0.616 ± 0.222	0.746 ± 0.249	0.666 ± 0.102	0.856 ± 0.252	0.877 ± 0.058
Walking	1.0 ± 0	0.986 ± 0.004	0.818 ± 0.144	1.0 ± 0	1.0 ± 0	0.994 ± 0.011	0.989 ± 0.015
Jogging	0.96 ± 0.07	0.978 ± 0.039	0.778 ± 0.342	0.966 ± 0.048	0.902 ± 0.056	0.83 ± 0.192	0.967 ± 0.023
Running	0.56 ± 0.335	0.99 ± 0.014	0.998 ± 0.004	0.864 ± 0.167	0.998 ± 0.004	0.81 ± 0.142	0.887 ± 0.075
Identify Subject	0.894 ± 0.129	0.961 ± 0.045	0.796 ± 0.103	0.934 ± 0.086	0.885 ± 0.105	0.96 ± 0.045	

TABLE XVIII: Classification Accuracy for top ensemble fit to 10s of data. Overall Accuracy: 0.5208 Task Accuracy: 0.706533333333 Walking Like 0.934 Running like 0.999666666667 Subject Accuracy: 0.587

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.796 ± 0.224	0.116 ± 0.044	0.1 ± 0.044	0.14 ± 0.093	0.532 ± 0.3	0.504 ± 0.191	0.597 ± 0.105
Down	0.916 ± 0.044	0.064 ± 0.021	0.144 ± 0.027	0.106 ± 0.027	0.714 ± 0.096	0.748 ± 0.292	0.57 ± 0.11
Walking	0.872 ± 0.147	0.0 ± 0	0.014 ± 0.016	0.002 ± 0.004	0.964 ± 0.019	0.108 ± 0.053	0.619 ± 0.123
Jogging	0.578 ± 0.231	0.804 ± 0.149	0.762 ± 0.323	0.852 ± 0.17	0.0 ± 0	0.192 ± 0.208	0.756 ± 0.117
Running	0.802 ± 0.111	0.986 ± 0.02	0.948 ± 0.046	0.904 ± 0.08	0.968 ± 0.017	0.988 ± 0.014	0.992 ± 0.005
Identify Subject	0.821 ± 0.112	0.426 ± 0.385	0.426 ± 0.321	0.428 ± 0.34	0.746 ± 0.282	0.675 ± 0.288	

TABLE XIX: Classification Accuracy for top ensemble fit to 20s of data. Overall Accuracy: 0.643133333333 Task Accuracy: 0.766 Walking Like 0.973666666667 Running like 0.998166666667 Subject Accuracy: 0.723333333333

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.92 ± 0.046	0.438 ± 0.168	0.296 ± 0.088	0.65 ± 0.179	0.636 ± 0.195	0.888 ± 0.128	0.749 ± 0.08
Down	0.946 ± 0.064	0.4 ± 0.156	0.526 ± 0.23	0.606 ± 0.04	0.828 ± 0.111	0.81 ± 0.294	0.825 ± 0.067
Walking	0.98 ± 0.027	0.38 ± 0.277	0.134 ± 0.072	0.022 ± 0.034	0.704 ± 0.116	0.454 ± 0.146	0.549 ± 0.117
Jogging	0.562 ± 0.242	0.614 ± 0.106	0.778 ± 0.313	0.96 ± 0.054	0.056 ± 0.029	0.13 ± 0.079	0.765 ± 0.11
Running	0.75 ± 0.328	0.966 ± 0.051	0.966 ± 0.041	0.9 ± 0.171	0.996 ± 0.004	0.998 ± 0.004	0.941 ± 0.068
Identify Subject	0.839 ± 0.142	0.665 ± 0.215	0.582 ± 0.237	0.672 ± 0.289	0.748 ± 0.27	0.835 ± 0.165	

TABLE XX: Classification Accuracy for random ensemble fit to all data. Overall Accuracy: 0.857333333333 Task Accuracy: 0.914733333333 Walking Like 0.991111111111 Running like 0.9995 Subject Accuracy: 0.895333333333

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.9 ± 0.04	0.926 ± 0.06	0.57 ± 0.044	0.804 ± 0.138	0.576 ± 0.221	0.884 ± 0.128	0.825 ± 0.068
Down	0.944 ± 0.05	0.81 ± 0.083	0.596 ± 0.224	0.734 ± 0.201	0.744 ± 0.14	0.862 ± 0.233	0.897 ± 0.049
Walking	1.0 ± 0	0.984 ± 0.014	0.758 ± 0.223	0.998 ± 0.004	0.996 ± 0.004	0.992 ± 0.014	0.978 ± 0.03
Jogging	0.92 ± 0.14	0.998 ± 0.004	0.772 ± 0.33	0.978 ± 0.03	0.906 ± 0.041	0.758 ± 0.18	0.968 ± 0.019
Running	0.652 ± 0.307	0.978 ± 0.018	0.998 ± 0.004	0.878 ± 0.163	0.996 ± 0.004	0.808 ± 0.137	0.907 ± 0.061
Identify Subject	0.89 ± 0.101	0.948 ± 0.062	0.764 ± 0.116	0.922 ± 0.091	0.894 ± 0.094	0.955 ± 0.05	

TABLE XXI: Classification Accuracy for random ensemble fit to 10s of data. Overall Accuracy: 0.4518 Task Accuracy: 0.679066666667 Walking Like 0.959666666667 Running like 0.9895 Subject Accuracy: 0.559866666667

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.762 ± 0.069	0.054 ± 0.027	0.128 ± 0.042	0.058 ± 0.046	0.55 ± 0.204	0.232 ± 0.091	0.547 ± 0.084
Down	0.882 ± 0.046	0.152 ± 0.054	0.368 ± 0.051	0.232 ± 0.124	0.516 ± 0.176	0.692 ± 0.162	0.686 ± 0.086
Walking	0.784 ± 0.049	0.04 ± 0.03	0.012 ± 0.014	0.004 ± 0.007	0.69 ± 0.124	0.272 ± 0.042	0.56 ± 0.104
Jogging	0.366 ± 0.142	0.76 ± 0.067	0.404 ± 0.171	0.696 ± 0.144	0.118 ± 0.052	0.14 ± 0.101	0.675 ± 0.098
Running	0.422 ± 0.113	0.824 ± 0.088	0.744 ± 0.069	0.89 ± 0.038	0.806 ± 0.045	0.956 ± 0.03	0.928 ± 0.039
Identify Subject	0.723 ± 0.162	0.449 ± 0.357	0.408 ± 0.207	0.435 ± 0.336	0.697 ± 0.224	0.647 ± 0.271	

TABLE XXII: Classification Accuracy for random ensemble fit to 20s of data. Overall Accuracy: 0.5568 Task Accuracy: 0.731466666667 Walking Like 0.977888888889 Running like 0.989666666667 Subject Accuracy: 0.6498

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.704 ± 0.176	0.518 ± 0.072	0.39 ± 0.044	0.454 ± 0.167	0.484 ± 0.227	0.632 ± 0.161	0.737 ± 0.072
Down	0.894 ± 0.041	0.404 ± 0.111	0.464 ± 0.187	0.516 ± 0.086	0.588 ± 0.119	0.798 ± 0.25	0.796 ± 0.065
Walking	0.684 ± 0.114	0.066 ± 0.026	0.09 ± 0.06	0.012 ± 0.014	0.698 ± 0.066	0.39 ± 0.067	0.484 ± 0.098
Jogging	0.564 ± 0.145	0.876 ± 0.042	0.468 ± 0.218	0.774 ± 0.131	0.19 ± 0.1	0.138 ± 0.067	0.701 ± 0.105
Running	0.546 ± 0.259	0.912 ± 0.065	0.856 ± 0.098	0.922 ± 0.031	0.716 ± 0.057	0.956 ± 0.024	0.939 ± 0.041
Identify Subject	0.722 ± 0.106	0.604 ± 0.31	0.495 ± 0.207	0.604 ± 0.296	0.681 ± 0.187	0.792 ± 0.196	

TABLE XXIII: Classification Accuracy for mixed ensemble fit to all data. Overall Accuracy: 0.865466666667 Task Accuracy: 0.9164 Walking Like 0.988888888889 Running like 0.9985 Subject Accuracy: 0.903866666667

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.924 ± 0.046	0.916 ± 0.076	0.604 ± 0.016	0.844 ± 0.112	0.648 ± 0.187	0.85 ± 0.173	0.84 ± 0.063
Down	0.944 ± 0.069	0.824 ± 0.084	0.546 ± 0.233	0.774 ± 0.198	0.764 ± 0.116	0.87 ± 0.228	0.894 ± 0.048
Walking	1.0 ± 0	0.996 ± 0.007	0.802 ± 0.157	1.0 ± 0	0.998 ± 0.004	0.992 ± 0.01	0.986 ± 0.022
Jogging	0.918 ± 0.144	0.994 ± 0.007	0.786 ± 0.34	0.972 ± 0.049	0.916 ± 0.03	0.83 ± 0.199	0.974 ± 0.019
Running	0.624 ± 0.324	0.954 ± 0.041	1.0 ± 0	0.888 ± 0.146	0.988 ± 0.017	0.798 ± 0.12	0.888 ± 0.07
Identify Subject	0.89 ± 0.106	0.954 ± 0.057	0.779 ± 0.122	0.939 ± 0.076	0.905 ± 0.082	0.956 ± 0.046	

TABLE XXIV: Classification Accuracy for mixed ensemble fit to 10s of data. Overall Accuracy: 0.480533333333 Task Accuracy: 0.692866666667 Walking Like 0.962555555556 Running like 0.994833333333 Subject Accuracy: 0.578133333333

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.9 ± 0.088	0.1 ± 0.051	0.098 ± 0.031	0.054 ± 0.036	0.46 ± 0.257	0.212 ± 0.099	0.537 ± 0.086
Down	0.856 ± 0.07	0.18 ± 0.076	0.262 ± 0.085	0.202 ± 0.094	0.664 ± 0.134	0.746 ± 0.213	0.685 ± 0.088
Walking	0.698 ± 0.028	0.034 ± 0.012	0.05 ± 0.034	0.004 ± 0.007	0.824 ± 0.061	0.282 ± 0.063	0.58 ± 0.111
Jogging	0.538 ± 0.157	0.934 ± 0.041	0.528 ± 0.23	0.692 ± 0.167	0.096 ± 0.023	0.2 ± 0.137	0.733 ± 0.1
Running	0.554 ± 0.149	0.848 ± 0.144	0.85 ± 0.091	0.856 ± 0.054	0.764 ± 0.053	0.93 ± 0.066	0.929 ± 0.041
Identify Subject	0.776 ± 0.126	0.479 ± 0.369	0.425 ± 0.242	0.425 ± 0.335	0.713 ± 0.239	0.65 ± 0.289	

TABLE XXV: Classification Accuracy for mixed ensemble fit to 20s of data. Overall Accuracy: 0.5828 Task Accuracy: 0.741466666667 Walking Like 0.978666666667 Running like 0.993166666667 Subject Accuracy: 0.669

	Subject 1	Subject 2	Subject 3	Subject 4	Subject 5	Subject 6	Identify Subject
Up	0.714 ± 0.153	0.642 ± 0.095	0.394 ± 0.036	0.48 ± 0.161	0.526 ± 0.257	0.708 ± 0.182	0.763 ± 0.068
Down	0.872 ± 0.053	0.35 ± 0.096	0.524 ± 0.187	0.588 ± 0.102	0.67 ± 0.108	0.81 ± 0.273	0.792 ± 0.061
Walking	0.726 ± 0.095	0.06 ± 0.038	0.1 ± 0.065	0.004 ± 0.004	0.724 ± 0.094	0.28 ± 0.087	0.467 ± 0.106
Jogging	0.586 ± 0.135	0.908 ± 0.062	0.534 ± 0.234	0.8 ± 0.153	0.166 ± 0.088	0.202 ± 0.081	0.754 ± 0.099
Running	0.654 ± 0.323	0.892 ± 0.108	0.908 ± 0.068	0.924 ± 0.06	0.798 ± 0.092	0.94 ± 0.035	0.931 ± 0.049
Identify Subject	0.74 ± 0.089	0.62 ± 0.316	0.537 ± 0.213	0.626 ± 0.294	0.723 ± 0.217	0.767 ± 0.224	

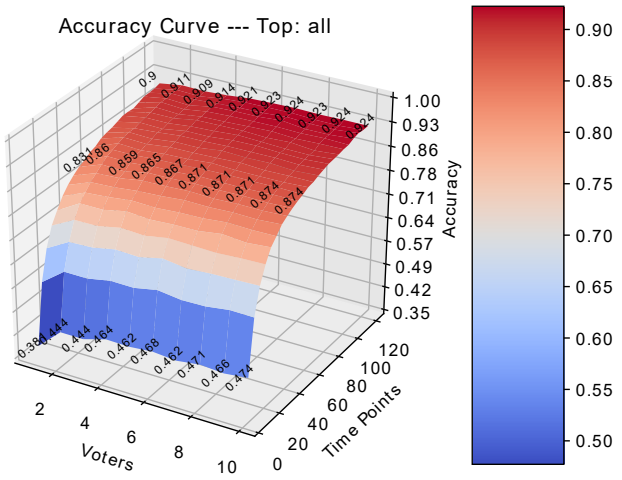

Fig. 16: Accuracy Curve for top ensemble fit with all data.

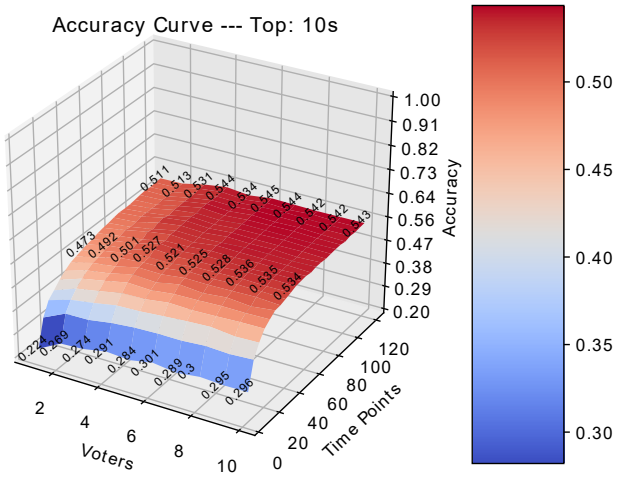

Fig. 17: Accuracy Curve for top ensemble fit with 10s of data.

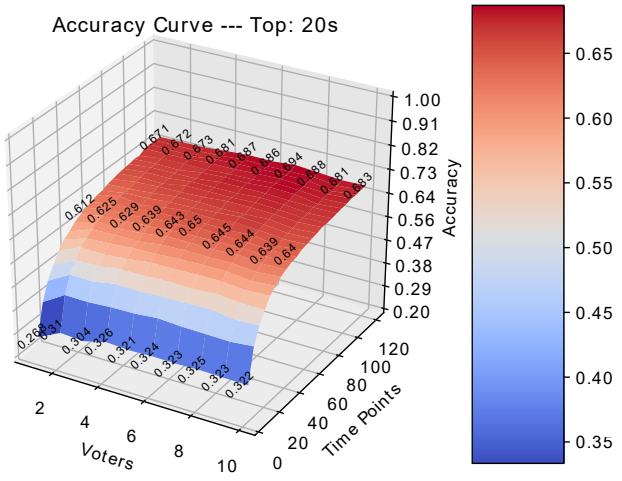

Fig. 18: Accuracy Curve for top ensemble fit with 20s of data.

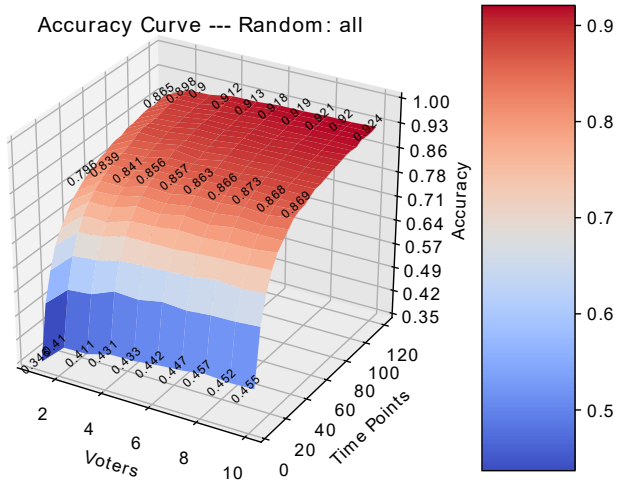

Fig. 19: Accuracy Curve for random ensemble fit with all data.

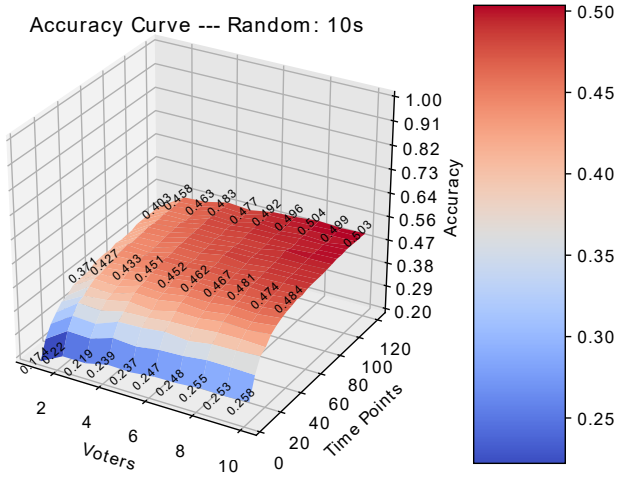

Fig. 20: Accuracy Curve for random ensemble fit with 10s of data.

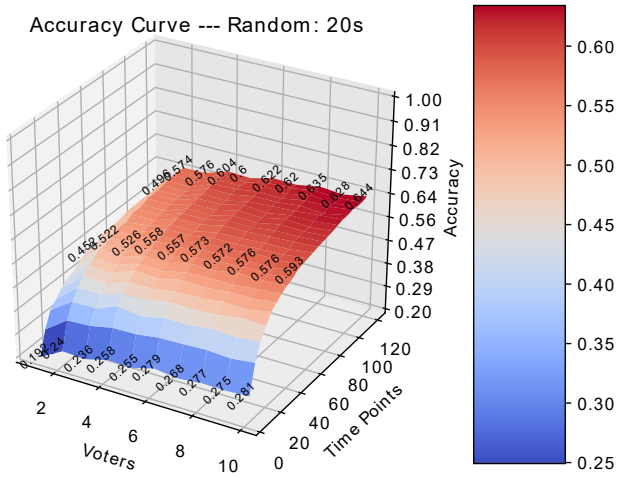

Fig. 21: Accuracy Curve for random ensemble fit with 20s of data.

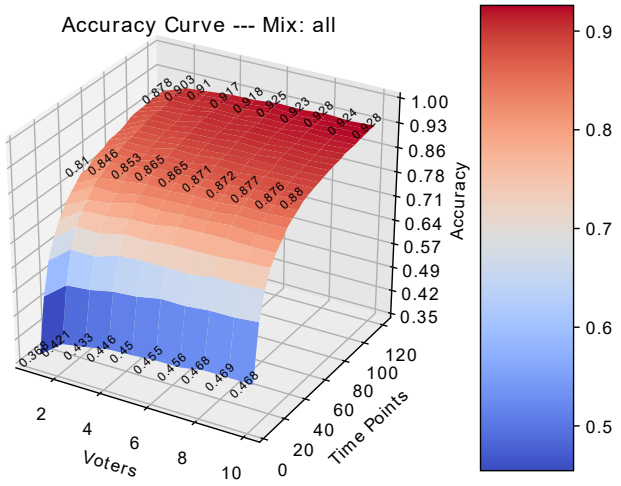

Fig. 22: Accuracy Curve for mixed ensemble fit with all data.

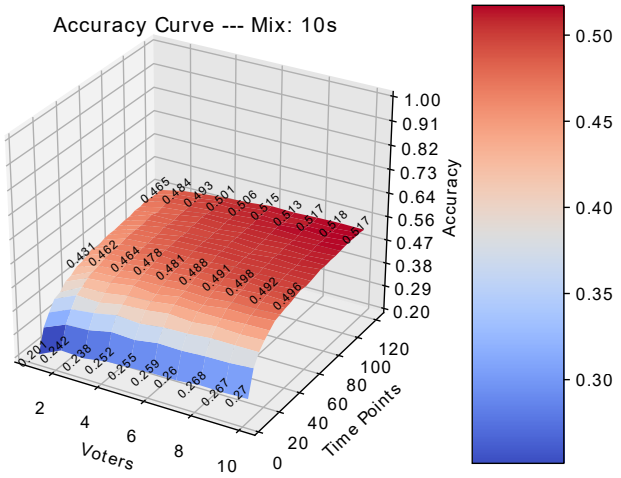

Fig. 23: Accuracy Curve for mixed ensemble fit with 10s of data.

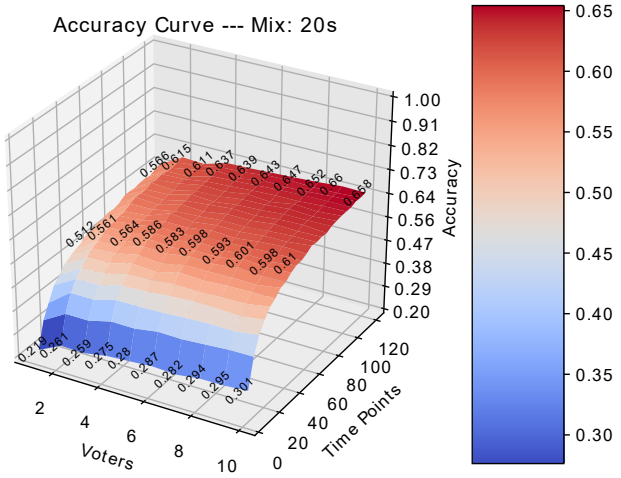

Fig. 24: Accuracy Curve for mixed ensemble fit with 20s of data.

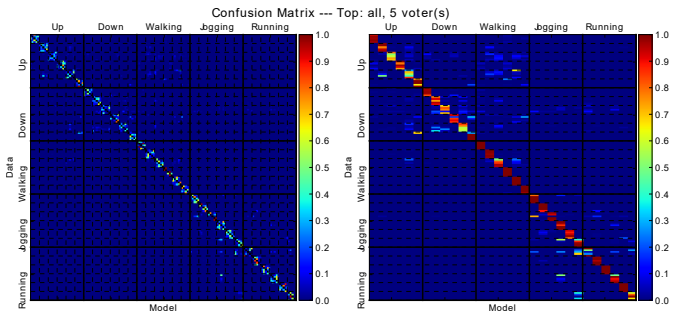

Fig. 25: Classification confusion matrix for top ensemble fit to all data.

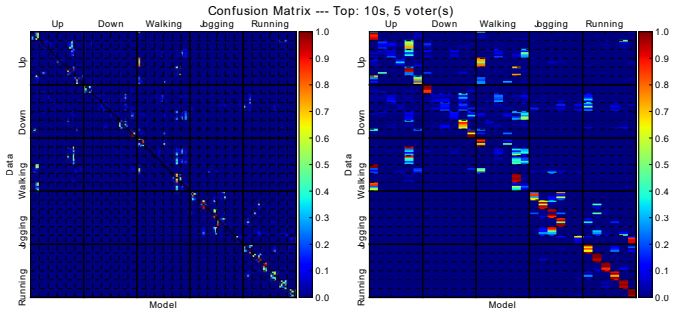

Fig. 26: Classification confusion matrix for top ensemble fit to 10s of data.

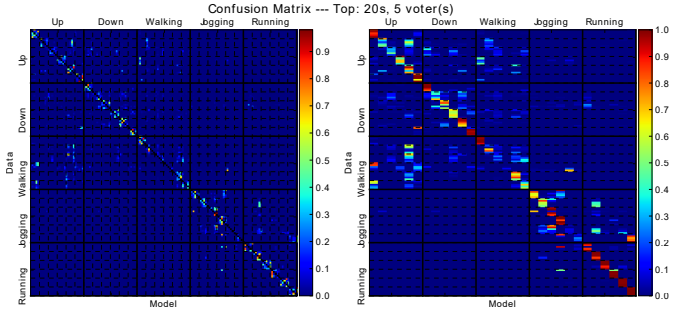

Fig. 27: Classification confusion matrix for top ensemble fit to 20s of data.

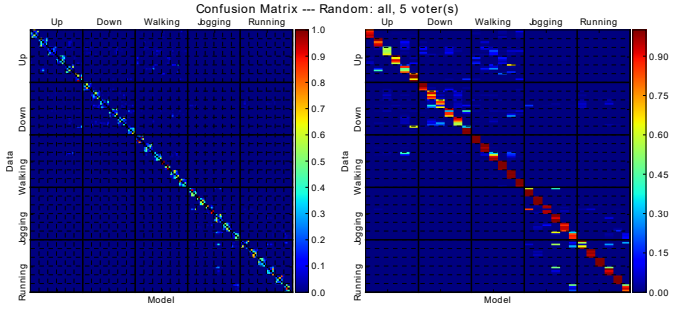

Fig. 28: Classification confusion matrix for random ensemble fit to all data.

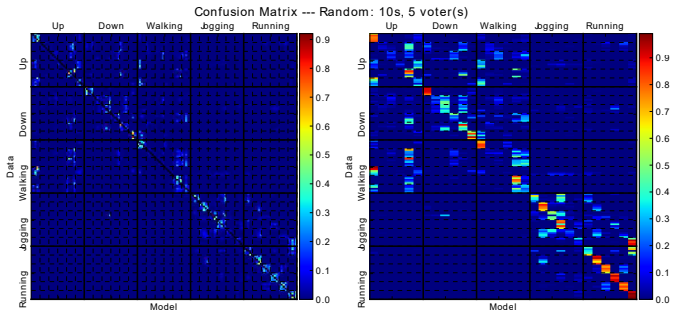

Fig. 29: Classification confusion matrix for random ensemble fit to 10s of data.

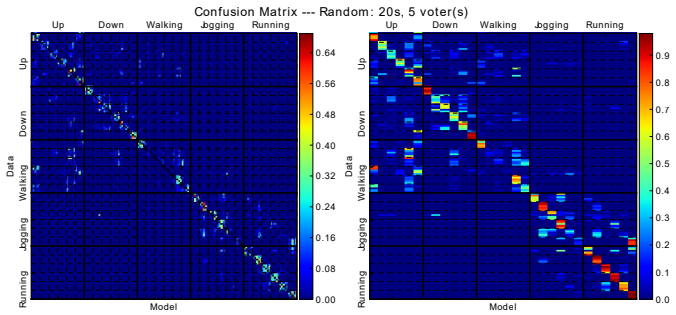

Fig. 30: Classification confusion matrix for random ensemble fit to 20s of data.

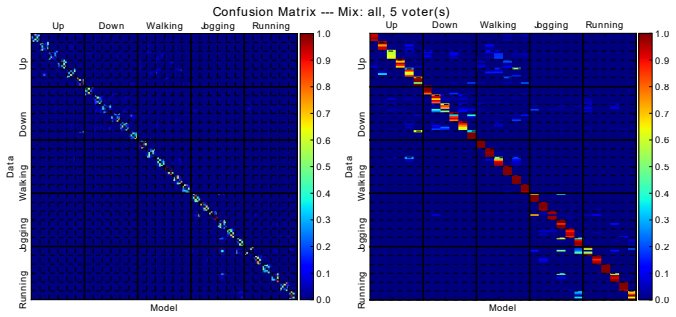

Fig. 31: Classification confusion matrix for mixed ensemble fit to all data.

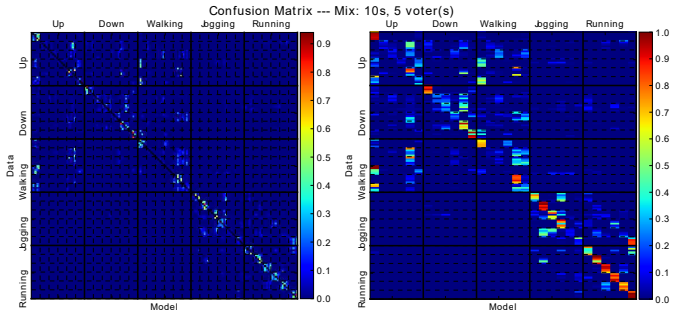

Fig. 32: Classification confusion matrix for mixed ensemble fit to 10s of data.

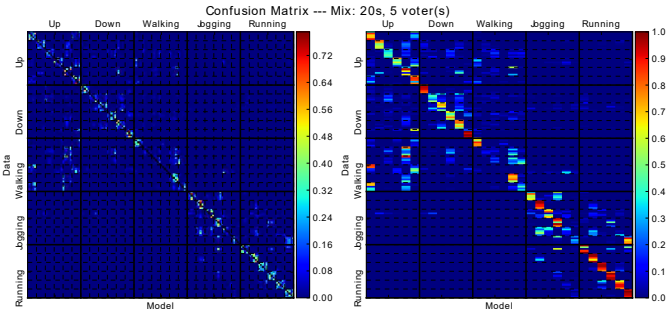

Fig. 33: Classification confusion matrix for mixed ensemble fit to 20s of data.

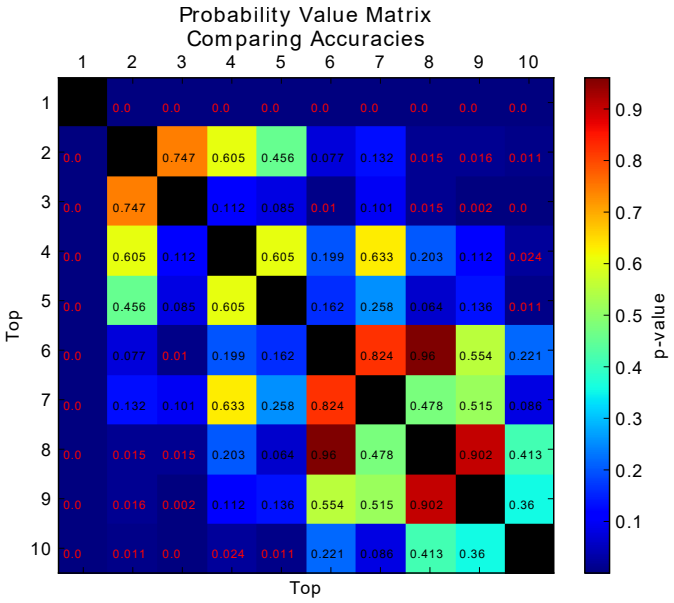

Fig. 34: Top ensemble classifier vs. top ensemble classifier when models were fit to all data and classifier was given 50 time points.

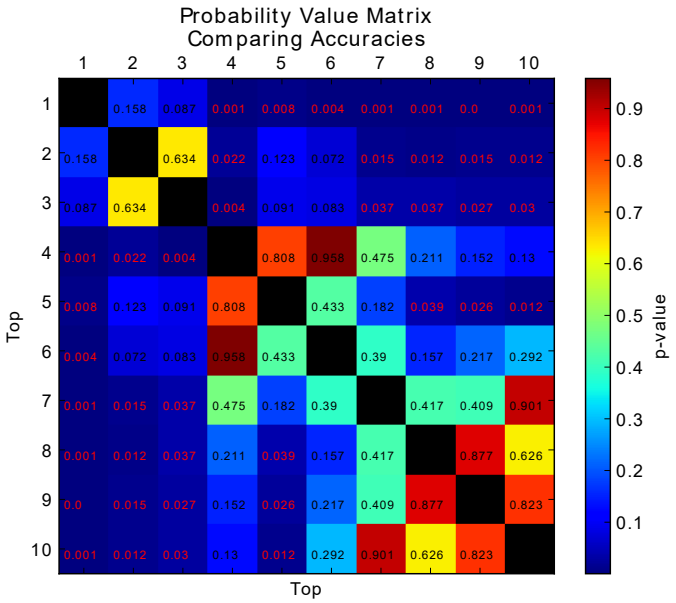

Fig. 35: Top ensemble classifier vs. top ensemble classifier when models were fit to 10s of data and classifier was given 50 time points.

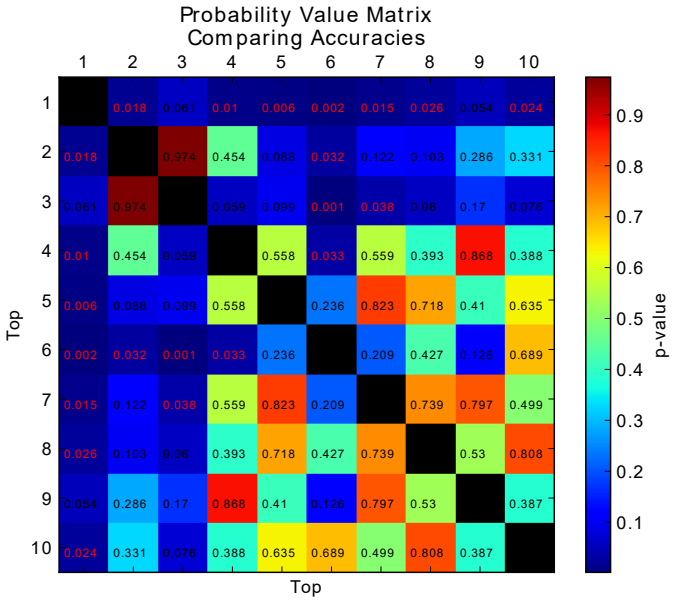

Fig. 36: Top ensemble classifier vs. top ensemble classifier when models were fit to 20s of data and classifier was given 50 time points.

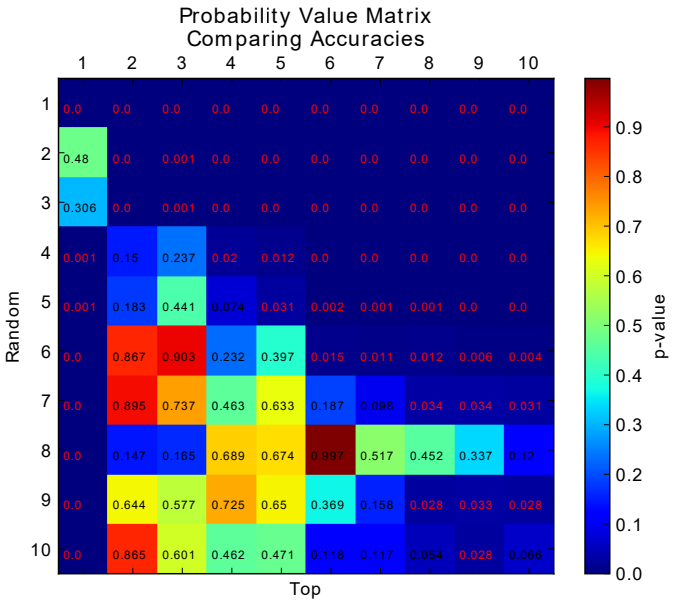

Fig. 37: Random ensemble classifier vs. top ensemble classifier when models were fit to all data and classifier was given 50 time points.

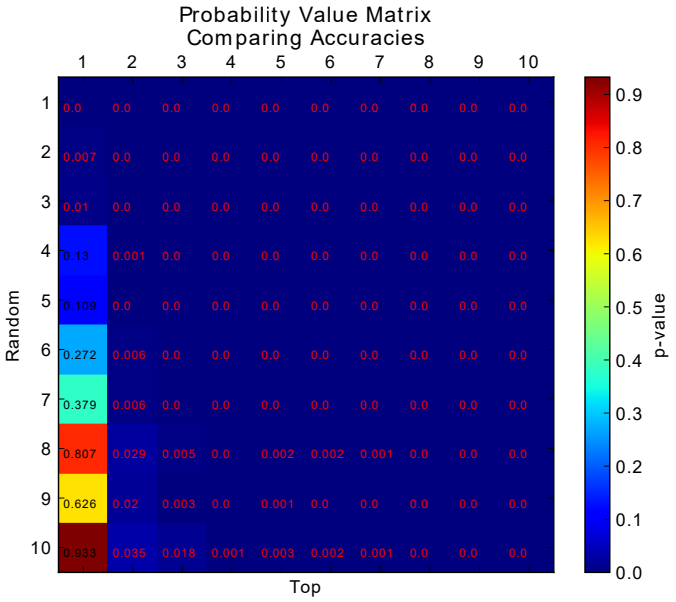

Fig. 38: Random ensemble classifier vs. top ensemble classifier when models were fit to 10s of data and classifier was given 50 time points.

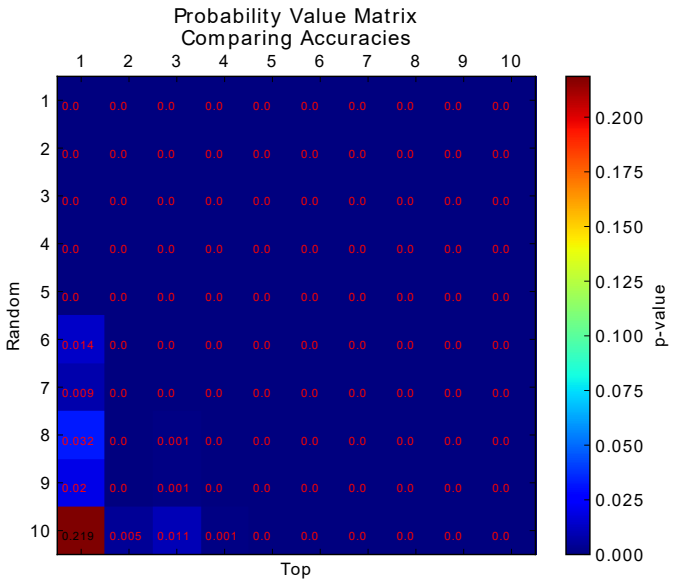

Fig. 39: Random ensemble classifier vs. top ensemble classifier when models were fit to 20s of data and classifier was given 50 time points.