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Project 2A

Features:

SpeedDev, XDev, XvelocityChange, ZDev, ZDistance

5 x 1 feature

SpeedDev
Decision Tree

Accuracy	94.8569218870843%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.9169719169719169	0.03678551216751556	0.9203431372549019	0.9169719169719169	WALK
0.9632144878324844	0.08302808302808302	0.9615819209039548	0.9632144878324844	STATIONARY

Confusion Matrix			
Classified As	a	b	
	751.0	68.0	a = WALK
	65.0	1702.0	b = STATIONARY

XDev
Decision Tree

Accuracy	88.16705336426914%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.8473748473748474	0.10243350311262026	0.7931428571428571	0.8473748473748474	WALK
0.8975664968873798	0.15262515262515264	0.9269433080070134	0.8975664968873798	STATIONARY

Confusion Matrix			
Classified As	a	b	
	694.0	125.0	a = WALK
	181.0	1586.0	b = STATIONARY

XvelocityChange
Decision Tree

Accuracy	72.42846094354215%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.3028083028083028	0.08036219581211092	0.6358974358974359	0.3028083028083028	WALK
0.9196378041878891	0.6971916971916972	0.7399817850637522	0.9196378041878891	STATIONARY

Confusion Matrix			
Classified As	a	b	
	248.0	571.0	a = WALK
	142.0	1625.0	b = STATIONARY

ZDev
Decision Tree

Accuracy	93.19412219644238%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.9242979242979243	0.06451612903225806	0.8691159586681975	0.9242979242979243	WALK
0.9354838709677419	0.0757020757020757	0.9638483965014577	0.9354838709677419	STATIONARY

Confusion Matrix			
Classified As	a	b	
	757.0	62.0	a = WALK
	114.0	1653.0	b = STATIONARY

ZDistance
Decision Tree

Accuracy	72.46713070378964%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.2564102564102564	0.058290888511601587	0.670926517571885	0.2564102564102564	WALK
0.9417091114883984	0.743589743589743	0.732072151341839	0.9417091114883984	STATIONARY

Confusion Matrix			
Classified As	a	b	
	210.0	609.0	a = WALK
	103.0	1664.0	b = STATIONARY

3 x 2 features

SpeedDev + XDev

Decision Tree
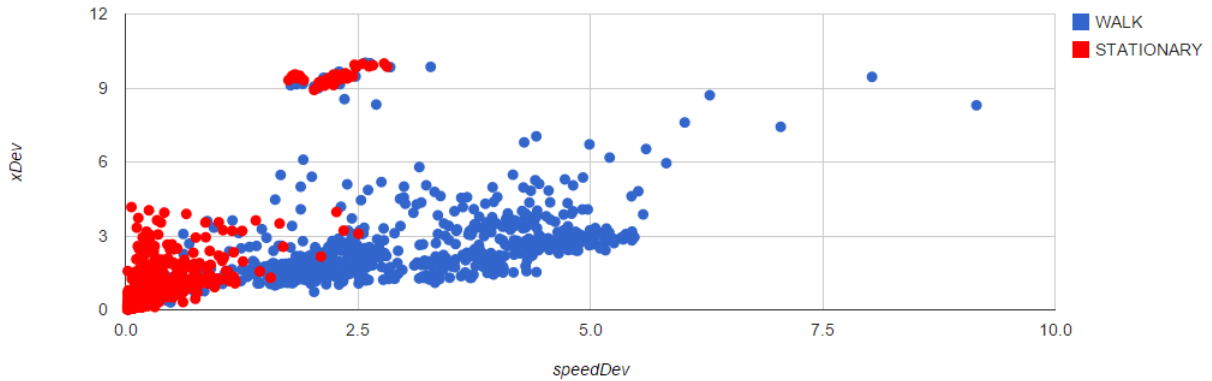
Accuracy	95.70765661252901%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.9084249084249084	0.02037351443123939	0.9538461538461539	0.9084249084249084	WALK
0.9796264855687606	0.09157509157509157	0.9584717607973422	0.9796264855687606	STATIONARY

Confusion Matrix			
Classified As	a	b	
	744.0	75.0	a = WALK
	36.0	1731.0	b = STATIONARY

Xvelocity change + SpeedDev

Decision Tree
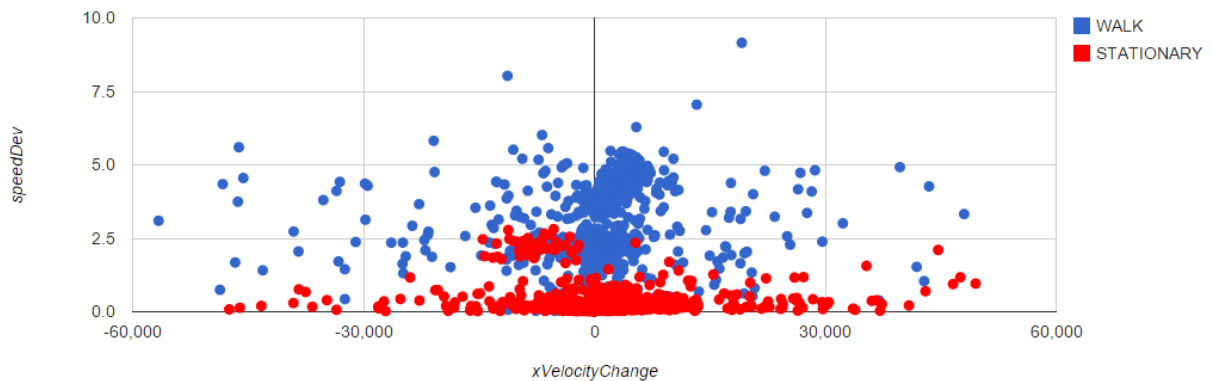
Accuracy	94.70224284609435%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.9133089133089133	0.03735144312393888	0.918918918918919	0.9133089133089133	WALK
0.9626485568760611	0.08669108669108669	0.9599322799097065	0.9626485568760611	STATIONARY

Confusion Matrix			
Classified As	a	b	
	748.0	71.0	a = WALK
	66.0	1701.0	b = STATIONARY

ZDistance + ZDev
Decision Tree
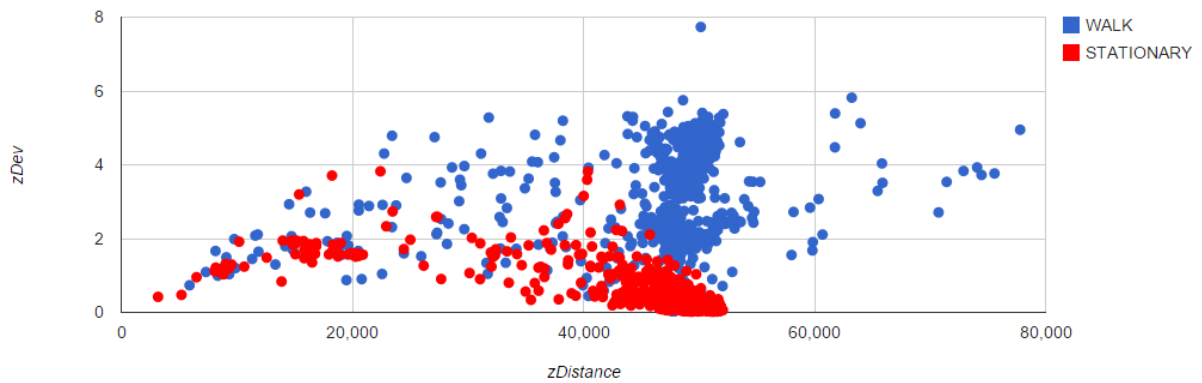
Accuracy	94.3155452436195%

Other Metrics				
TP Rate	**FP Rate**	**Precision**	**Recall**	
0.8608058608058609	0.01867572156196944	0.9552845528455285	0.8608058608058609	WALK
0.9813242784380306	0.1391941391941392	0.9383116883116883	0.9813242784380306	STATIONARY

Confusion Matrix			
Classified As	a	b	
	705.0	114.0	a = WALK
	33.0	1734.0	b = STATIONARY

1 x 5 features
Decision Tree

Accuracy	95.86233565351895%

Other Metrics				
TP Rate	FP Rate	Precision	Recall	
0.9145299145299145	0.020939445387662705	0.9529262086513995	0.9145299145299145	WALK
0.9790605546123373	0.08547008547008547	0.9611111111111111	0.9790605546123373	STATIONARY

Confusion Matrix			
Classified As	a	b	
	749.0	70.0	a = WALK
	37.0	1730.0	b = STATIONARY