**Data for Manuscript Figure Generation**

**Figure 1**

* GaitSignatures\_6D\_PCs.mat

**Figure 2**

* GaitSignatures\_6D\_PCs.mat
* GaitSignatures\_gaitphases.mat
* GaitSignatures\_subjectlist.mat \*
* GaitSignatures\_speedlist.mat

**Figure 3**

* GaitSignatures\_6D\_PCs.mat
* GaitSignatures\_EuclDistance\_toABcentroid.mat

**Figure 4**

* GaitSignatures\_6D\_PCs.mat
* GaitSignatures\_PhaseAveraged\_ExperimentalKinematics.mat
* AB07\_PC1\_Reconstruct.mat
* AB07\_PC2\_Reconstruct.mat
* AB07\_PC3\_Reconstruct.mat

**Figure 5**

* GaitSignatures\_PhaseAveraged\_ExperimentalKinematics.mat
* ALL\_MiddleSpeed1\_Reconstructions.mat
* ALL\_MiddleSpeed2\_Reconstructions.mat

**Figure 6**

* GaitSignatures\_PhaseAveraged\_ExperimentalKinematics.mat
* AB07\_ST09\_PC1swap\_Reconstruct.mat
* AB07\_ST09\_PC3swap\_Reconstruct.mat
* AB07\_ST06\_PC4swap\_Reconstruct.mat
* ST08\_AB07\_PC5swap\_Reconstruct.mat

**Figure 7**

* AB\_ExternalDriven\_Kinematics.mat
* AB\_lastcycle\_SelfDriven.mat
* AB\_EuclideanDist.mat
* AB\_Ext\_then\_Self\_Drive\_Trial.mat
* AB\_OrigCycleDurations.mat
* AB\_SelfDriven\_Cycle\_Duration.mat
* Stroke\_ExternalDriven\_Kinematics.mat
* Stroke\_lastcycle\_SelfDriven.mat
* Stroke\_EuclideanDist.mat
* Stroke\_Ext\_then\_Self\_Drive\_Trial.mat
* Stroke\_OrigCycleDurations.mat
* Stroke\_SelfDriven\_Cycle\_Duration.mat

**S1 Figure**

* **Read:** README\_HyperparameterSelection.txt in the ‘csv files’ folder
* TrainVal.csv
* GaitSigAlignment\_LongTime.csv
* GaitSigAlignment\_ShortTime.csv

**S2 Figure**

* GaitSignatures\_ValidationLossOverEpochs.mat
* GaitSignatures\_TrainingLossOverEpochs.mat

**S3 Figure**

* LOOCV\_GeneralizationLoss.mat
* LOOCV\_ValidationLoss.mat
* LOOCV\_TrainingLoss.mat
* LOOCV\_ext\_R2.mat
* LOOCV\_self\_R2.mat
* ALL\_Ext\_PhaseAvgShift.mat
* ALL\_Kin\_PhaseAvgShift.mat
* ALL\_self\_PhaseAvgShift.mat

**S4 Figure**

* GaitSignatures\_PCVarianceExplained.mat

**S5 Figure**

* SVM\_raw\_kin\_GaitGroup.mat
* SVM\_raw\_kin\_indiv.mat
* SVM\_kinandvel\_GaitGroup.mat
* SVM\_kinandvel\_indiv.mat
* SVM\_gaitsigs\_GaitGroup.mat
* SVM\_gaitsigs\_indiv.mat
* SVM\_discrete\_GaitGroup.mat
* SVM\_dicrete\_indiv.mat

**S6 Figure**

* GaitSignatures\_SelfDrivenR2.mat
* GaitSignatures\_ShuffledArbitraryAveragedR2.mat
* GaitSignatures\_EuclDistance\_toABcentroid.mat

\* Note: The original subject ID list in ‘GaitSignatures\_subjectlist.mat’ : ‘AB06, AB07, AB09, AB11, AB12, ST03, ST06, ST08, ST09, ST11, ST12, ST14’ have been renamed as follows respectively: ‘AB1, AB2, AB3, AB4, AB5, ST1, ST2, ST3, ST4, ST5, ST6, ST7’.

For more details and information on the above data files please contact: Taniel Winner at: tanielwinner01@gmail.com