

Data Preprocessing

Trip preprocessing

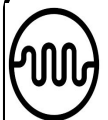
- Trip chaining
- Trip segmentation & segments filtering

Instances Creation

- Point-level motion characteristics
- Feature engineering



Time Domain Features



Freq. Domain Features (FFT)

Processed Instances

Class-Subspace Feature Selection

Train an initial Classifier

Compute SHAP values

Subspace Selection

Class 1 Subspace

Class 2 Subspace

Class N Subspace

Model Training & Evaluation

Class-Specific Model

Class 1 Model

Class 2 Model

Class N Model

Mode Prediction

Aggregate Predictions

Transportation Mode



Input Data

(GPS trajectories)