# Literature Review

## Similar Studies:

*Similar datasets:*

* NY Taxi-cab movements
* Uber-movements

*Similar Methods:*

* Maybe classify mode and where people are going? (after Bantis & Haworth, 2017)

## City research

Both fast and slow dynamics/flows have an impact on changes in a variable across space, accounting for these is essential in modelling [i.e. differencing to remove long-term trend] (Batty, 2013)

Understanding the interactions within complex system such as a city is a prerequisite for predicting changes within it… big data offers us an opportunity to study this (Cheng *et al.*, 2017)

## Montreal:

The city of Montreal, located within the Greater Montreal region is the largest city in Quebec with a population size of … . It is of particular interest to city transport research due to its unique road and public transport networks. There are a total of

[Map of the Island Montreal within the Greater Montreal Region and then Quebec]

## MTL Trajet & Similar Survey Projects

Data collection [or survey data] driven by data availability or convenience of data collection rather than by domain knowledge, theory, or insight into the process(es) of interest. (An *et al.*, 2015).

## Transport mode detection

A significant amount of literature exists for transport-mode detection. Something which is of prime concern to companies utilising spatial information derived from GPS data. Determining transport mode through the use of deep-neural networks such as those with convolutional layers. These networks .

Bantis & Haworth (2017) socio-demographics and how you travel. Environmental and social factors affect the way you travel. Although data used in this study is not

## Lead onto class identification in transport

Significant class-imbalance exists in the MTL Trajet data

## Including external sources:

POI and importance

## Other:

ST-KDE and space-time decomposition to compute space-time methodologies (Hohl *et al.*, 2016)

there is not a close coupling between big data and space-time methods used to analyse them (An *et al.*, 2015)