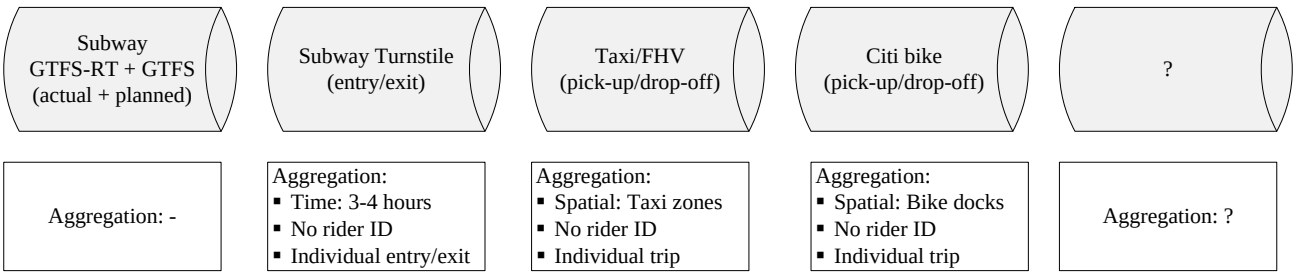
Incidental mode shift of New York City subway riders due to disturbances and disruptions towards shared mobility: Revealed patterns from open transportation data



Problem description

Incidental deviations from habit are likely to change long-term transport behaviours. Therefore, transportation providers strive to maintain a level-of-service such that existing users do not shift modes.

However, with the rise of easily accessible shared mobility services, when disruptions and disturbances occur in public transport networks, transit users may choose to complete particular trips with these new modes.

Typically, such incidental mode shift preferences are obtained by stated choice experiments. Now, however, revealed analyses are becoming possible as cities increasingly collect and put in the public domain large transportation datasets.

Assignment

- The objective is to understand the extent to which disturbances/disruptions in the public transport network lead to an incidental (i.e., *not* long-term) change in shared mobility modes.
- This effect must be isolated and analysed using a suitable machine learning approach
- The data available for analysis is shown above and is from New York City, January-May 2018.
- Any other openly available data (e.g. weather, built environment, socio-economic) may be used

Candidate should

- Not be afraid of large datasets from different sources!
- Preferably have experience with Python/R

Information:

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