FINDING PATTERNS IN TAXI DEMAND

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Finding Patterns in Taxi Demand

- Spatial Pattern
  - Correlation between different locations
- Temporal Pattern
  - Demand fluctuation with time
Finding Patterns in Taxi Demand

- **Dataset:** Taxi pickup data
  - Average number of trips during each hour of the week at each location
  - Pickup numbers two hours before/after the time period at the given location
  - Pickup numbers in the neighbor area during the time period at the given location
Finding Patterns in Taxi Demand

- Dataset: Taxi drop off data
  - Similar features
  - Considering the time shift between the pickup and drop off
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- Dataset: MBTA subway data
  - Flows from each subway station
  - Weight them by their distances to the target location
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- Dataset: Weather data
  - Amount of rain fall
Finding Patterns in Taxi Demand

- Algorithm
  - Neural Networks
  - Ridge Regression
Finding Patterns in Taxi Demand

- Outliers
  - Convention centers
  - BOA pavilion
Finding Patterns in Taxi Demand

- Finding
  - Average demand
  - Fluctuation of demand
  - Large events
THANK YOU!