Forecasting the Demand of Bike-Sharing Services in Beijing

Motivation / Background

- High population density in cities requires sustainable transportation alternatives

Key Question

- Which factors drive bike-sharing demand in Beijing?

Relevant Literature

- Shaheen, Guzman, and Zhang 2010: ‘Bikesharing in Europe, the Americas, and Asia: Past, Present, and Future’
- Fishman, Washington, and Haworth 2013: ‘Bike share: a synthesis of the literature’

The Problem

- # of shared bicycles
- Germany: 12,474, US: 22,390, China: 735,508

Methodology

1. Literature Review
2. In-depth Interviews
3. Big Data & Machine Learning

Expected Contribution

TalkingData
- Insights commercial market
- Data analysis & machine-learning models
- Transferrable to other cities

Bike-Sharing
- More accurate and holistic demand forecasting
- Rebalancing optimization
- Transferrable to other commute types

Public Sector
- Urban transportation analytics
- Policy - making

Database

- Integrated data from various public source
- Collected data from TalkingData w/ review of schema and sample data

Insights

- Government’s ban in 2017
- Price and promotion policies
- Impact of pollution questionable
- City infrastructure

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