

# Urban Foundation Models



Downstream urban planning and reasoning tasks

Pre-trained models for ST data encoding

LLM-based ST models

## Trajectory data mining

Representation learning for similarity computation

Intelligent transportation

Recovery & Simplification

Anomaly detection

## Spatio-temporal forecasting

## Time series analytics

Imputation

Forecasting

Anomaly detection

## POI



Spatial keyword query (Geospatial IR)

POI knowledge graph

## Road network



Road network representation learning and applications

## Region



Region representation learning, analytics and applications

Region search and detection

## Recommendation & User modeling

### Check-ins



Next location prediction

POI recommendation

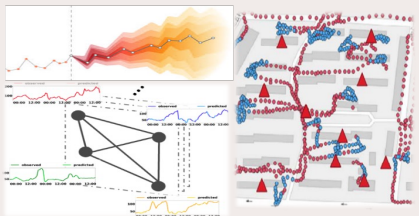
### General Setting



Sequential/Session/Group

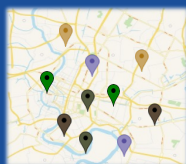
Search and retrieval

## Dynamic data



Time/Spatio-Temporal series

## Geospatial entities



Points

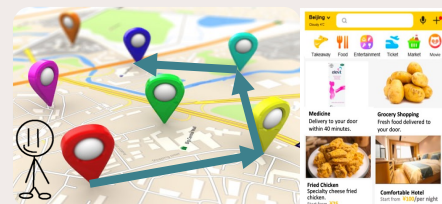


Polylines



Polygons

## User behaviors



Check-in/query/click