LISTANET

Local Indicators of Spatio-temporal Association for Network Data

Do similar things happen near in space also close in time, especially for data interactive within a network?

Think, congested streets that lag in traffic dispersion, genetic disease having high incidence in certain districts, and even your eye movements on a poster!

LISTANET could tell you the answer!

INTRODUCTION

LISTANET is a spatial statistical toolkit built in Python. It is designed to capture spatio-temporal hot spots as well as outliers of network constrained data. This toolkit consists of three components: Network Model Builder, Neighbor Weight Matrix Generation and Index Calculations.

FRAMEWORK

INPUT & OUTPUT

# Curb Parking Occupancy Example
```python
>>> file = pysal.open("Parking.dbf")
>>> x = numpy.array(file.by_col["Score"])
>>> y = pysal.open("Scenario.pd")
```

10:00 AM

12:00 PM

14:00 PM

Classified Network

Explore spatio-temporal association within grouped network.
e.g. Supply chain for different size markets.

Transitive Network

Generate directed network for event data along time line. Explore spatio-temporal transitive relationship.
e.g. Eye tracking analysis.

Static Network

Calculate local indicator of spatio-temporal association for physical directed network.
e.g. Curb parking occupancy analysis.

Capstone Project | Yanan Xin
Penn University of Pennsylvania
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