CloudTP: A Cloud-based Flexible Trajectory Preprocessing Framework

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Motivations
- Wide Applications of Trajectory Data
- Massive Data and Complicated Algo.
- Complex Steps and Different Modes

Overview
- Processing Pipeline
- Distributed Computing
- Customizable
- Support Multi. Modes

System Framework

CloudTP: Trajectory Preprocessing Task
- Noise Filtering
- Trajectory Segmentation
- Map Matching
- Index Building

Cloud Platform
- Azure Blob
- Azure Table
- Apache Spark

Distributed Processing

Preprocessing Job Submitting
- Dataset
- Algorithms
- Parameters

User Interacting
- Advanced User
- Normal User

Customize Modules

Submit Job

Data Access

Analysis

Visualization

Cloud + Client Deployment

Examples

Bike Lane Planning

Trip Temporal Distribution