

A Cloud-Based Trajectory Data Management System

Microsoft
Research
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Ruiyuan Li^{1,2}, Sijie Ruan^{1,2}, Jie Bao², Yu Zheng^{1,2,3}

西安电子科技大学
XIDIAN UNIVERSITY

¹School of Computer Science and Technology, Xidian University, China

²Urban Computing Group, Microsoft Research Asia, China

³Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, China



中国科学院
CHINESE ACADEMY OF SCIENCES

Background

➤ Massive trajectories are generated continuously



➤ Many applications rely highly on trajectory data



Taxi Management



Traffic Flow Prediction



Path Recommendation

System Features

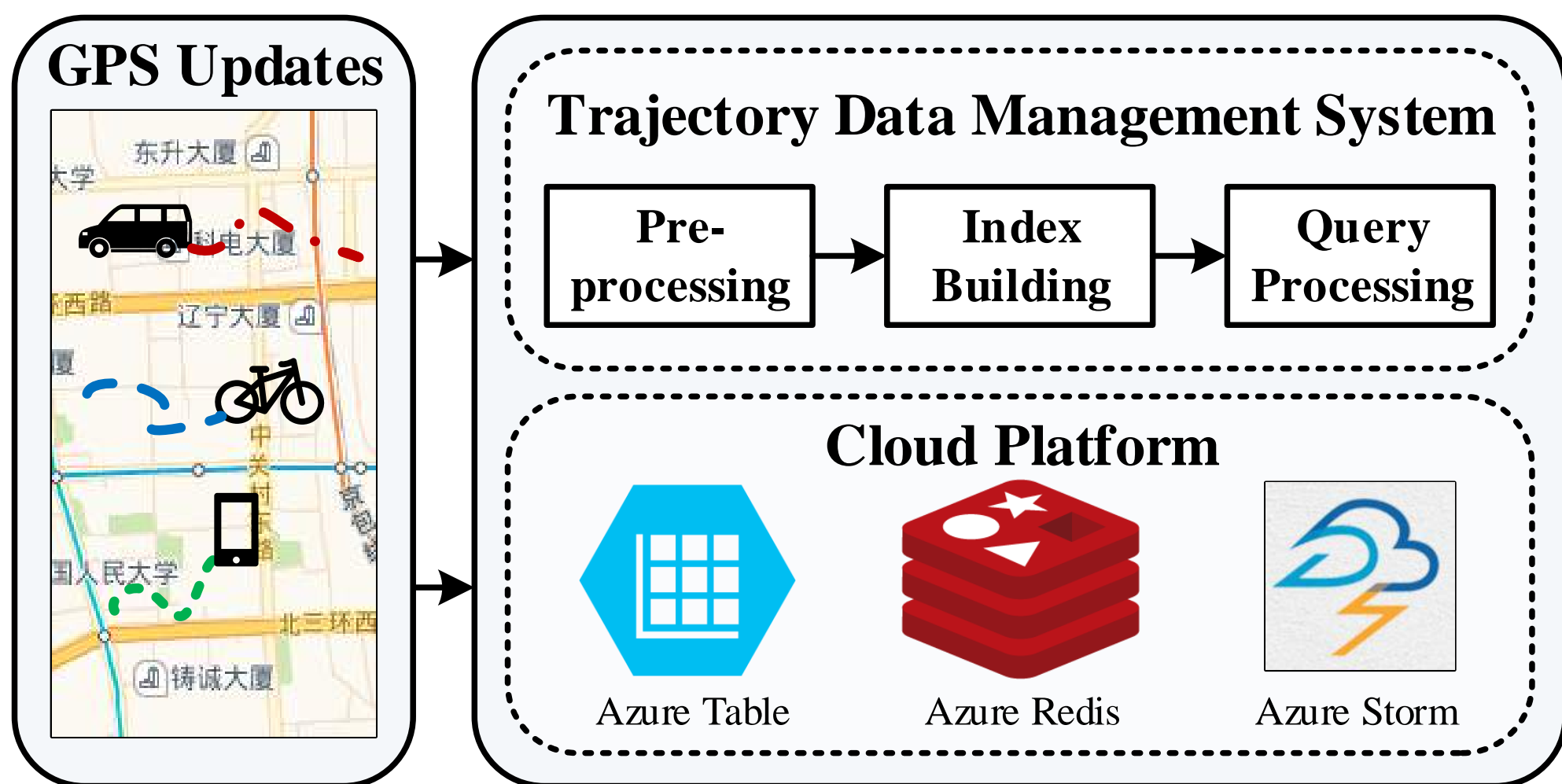
➤ Features

- Handling massive real-time trajectory *updates*
- For both *real-time* and *historical* trajectory queries
- Based on a cloud platform, i.e., *Microsoft Azure*

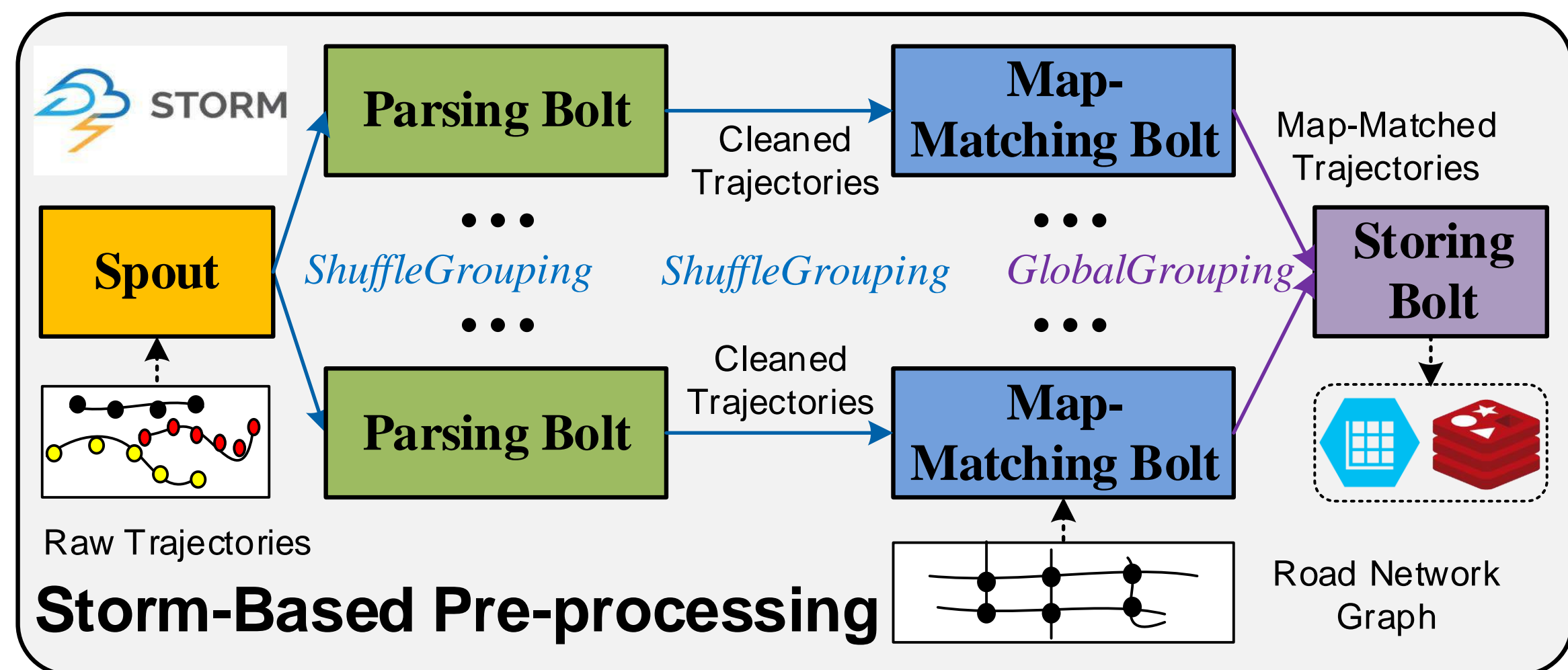
➤ Three types of query

- ID-Temporal query
- Spatio-Temporal query
- Path-Temporal query

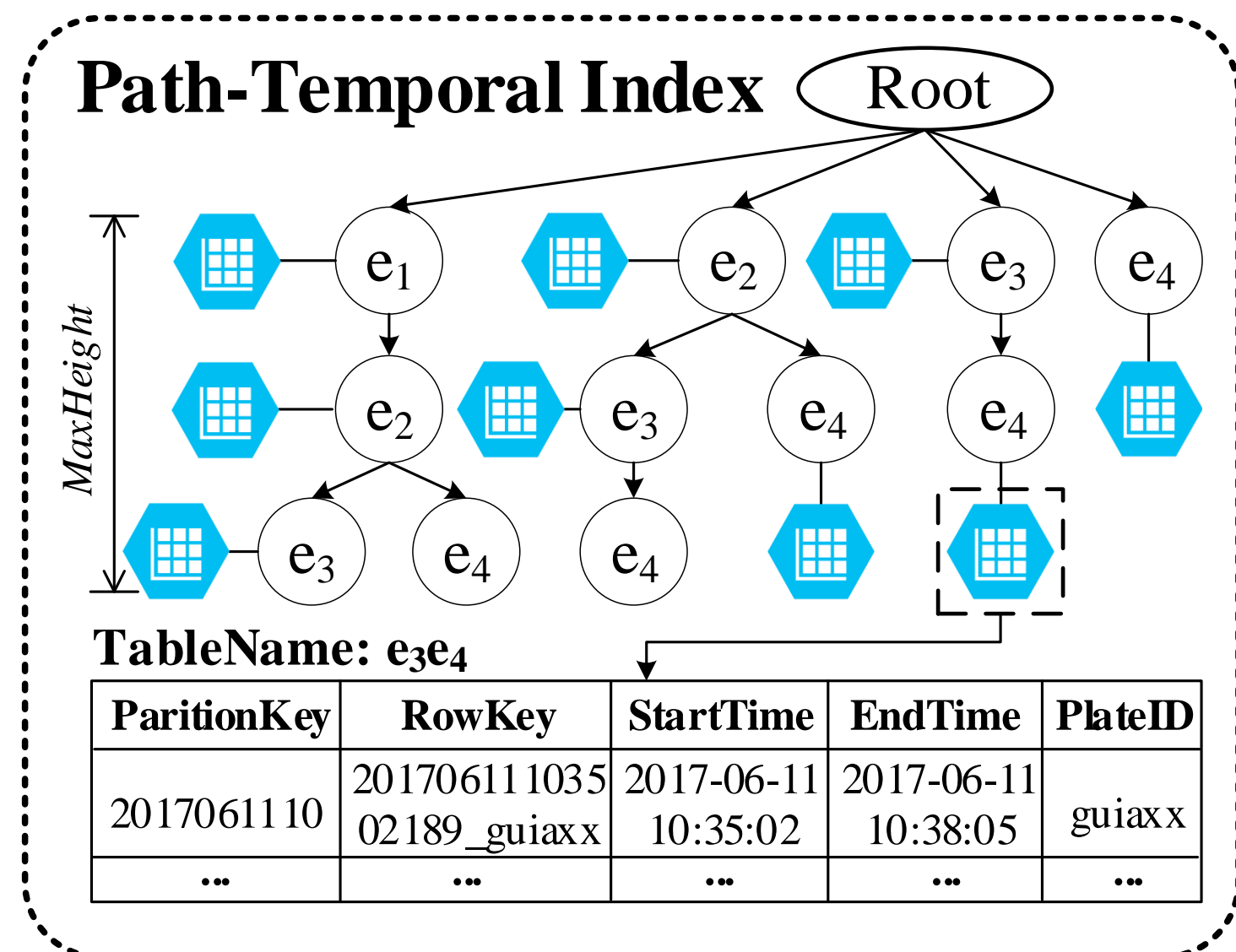
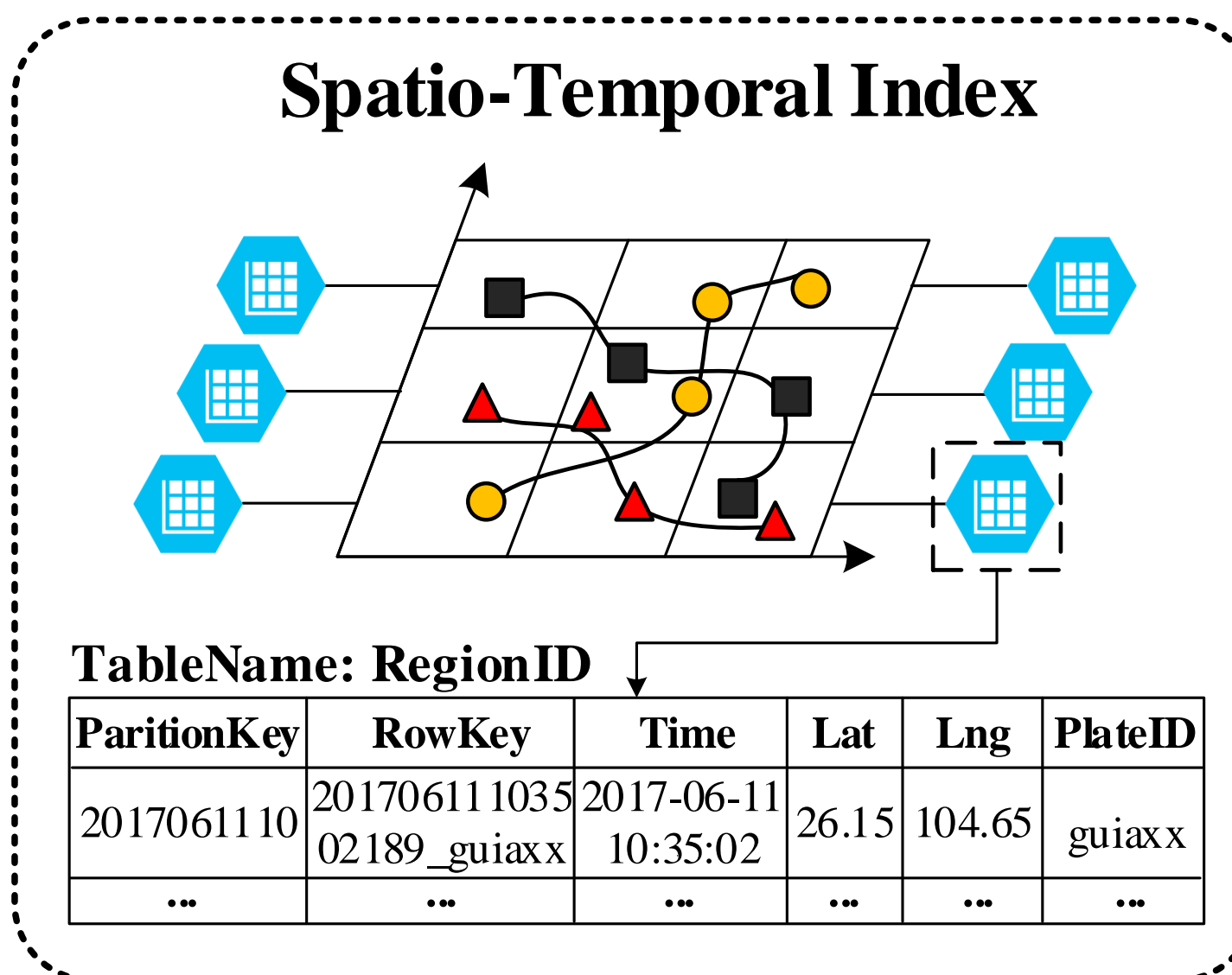
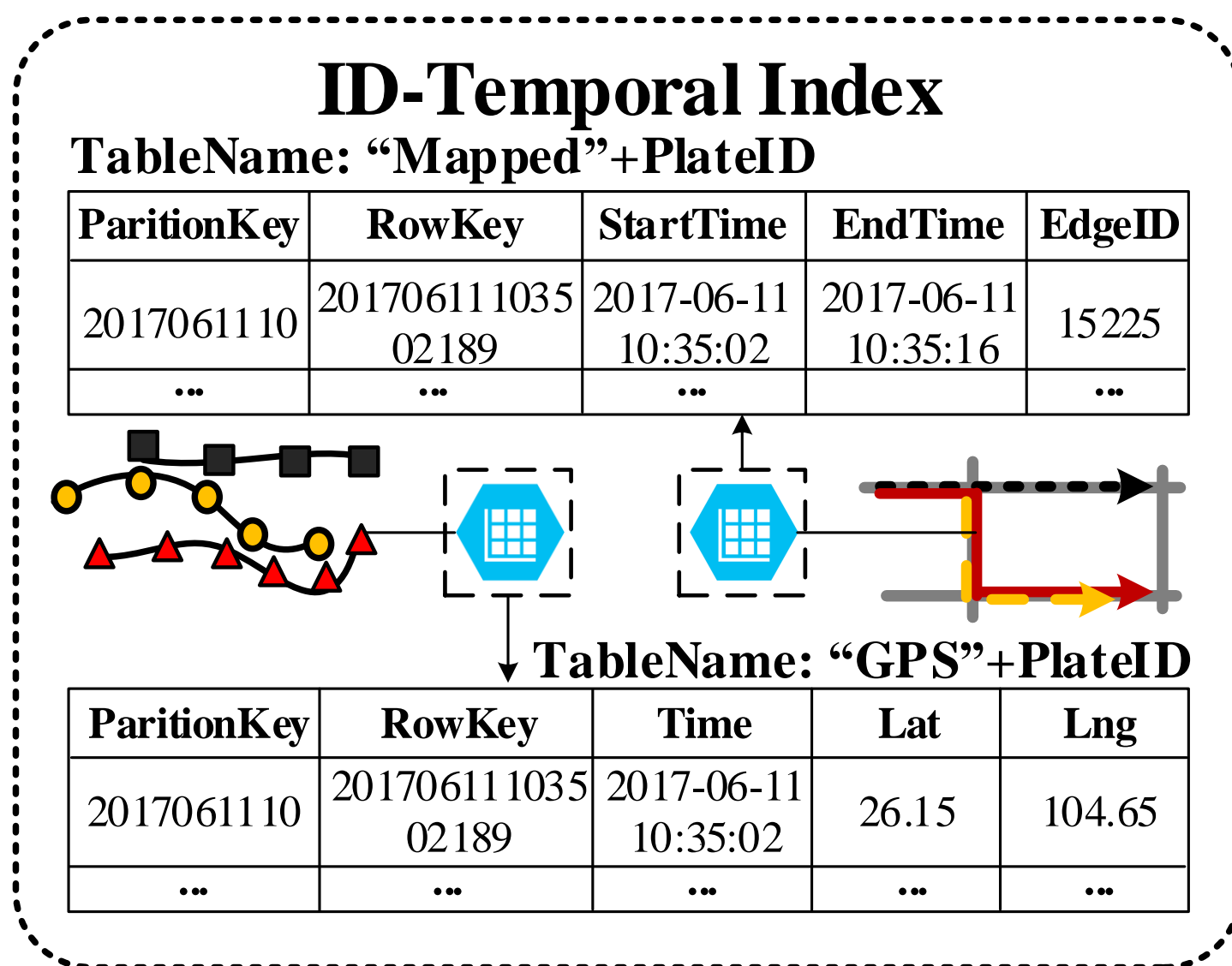
Framework



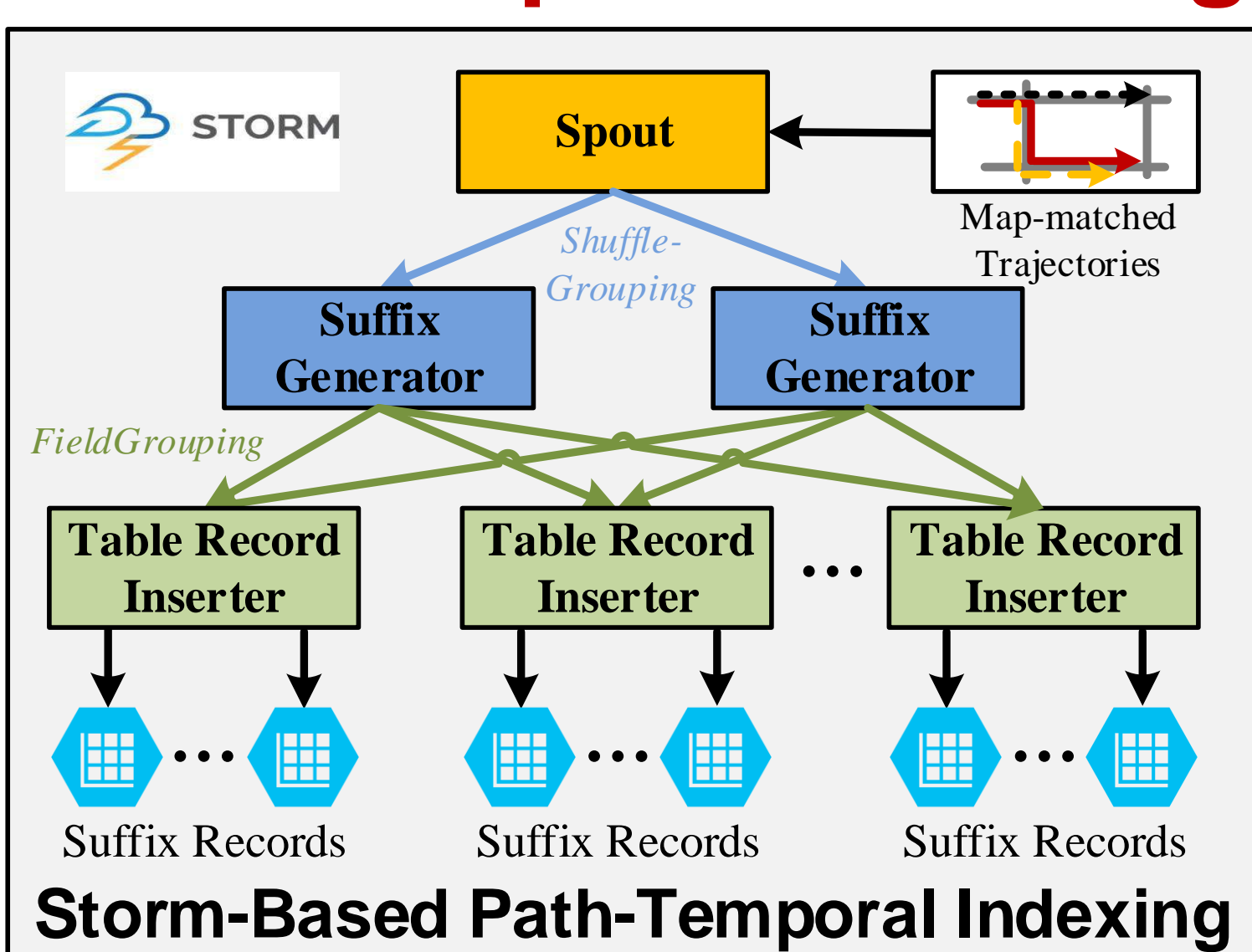
Pre-processing



Index Building



Path-Temporal Indexing



Demostration