Query Processing on Dynamic Networks with Contraction Hierarchies on Neo4j

Bachelor/Master

Summary
Extend the current implementation of Contraction Hierarchies on Neo4j to support shortest path query processing on dynamic networks.

Project Phase
Study the source code of the current CH implementation and implement a baseline approach to maintain the CH index.

Thesis Phase
Implement advanced maintenance operations for the CH index on Neo4j to handle dynamic changes on the network.

Requirements
- Experience in Java programming
- Course on Algorithms and Data Structures (or equivalent)

Preferable Courses (or equivalent)
- Database System Architecture and Implementation
- Graph Data Management and Analysis
- Efficient Route Planning Techniques

Contact
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