ZeBin Ren

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Education

Beijing Institute of Technology, School of Computer Science and Technology   *Sept.2019 - Present*
Master of Science in Computer Science and Technology   **GPA: 87.04/100**

Northeastern University, School of Computer Science and Technology   *Sept.2015 – June.2019*
Bachelor of Science in Computer Science and Technology   **GPA: 85.50/100**

LELTS: 7.5 (Reading: 9.0, Listening: 7.0, Writing: 7.0, Speaking: 6.0)

Research Experience

A Distributed Graph Computing Engine Based on Gemini   *June.2020 - Feb.2021*
Research Assistant at Data Science Lab, Beijing Institute of Technology

The project aimed at improving the performance based on an open source implementation of Gemini, a computation-central distributed graph computation system.

- Team leader of the project
- Proposing some improvements for the system
  - Adopting new graph cutting algorithm
  - Compressing the graph to improve memory efficiency and speed for storage-intensive algorithms
  - Using targeted send scheme instead of broadcast to reduce communication cost
- Designing and implementing a distributed kclique percolation algorithm

A Distributed Graph Computing Engine Based on NVM   *July.2021 – present*
Research Assistant at Data Science Lab, Beijing Institute of Technology

The project aimed at implementing a distributed graph computation engine on NVM(non volatile memory, the Intel Optane Persistent memory)

- Doing an extensive research on graph computation system(based on normal hardware and NVM)
- Learning about recent research on NVM as wells as the data structures based on NVM

Kclique Enumeration on Temporal Graph

Zebin Ren, Ronghua Li*   ***Supervisor: Prof. Ronghua Li***
Working paper

This work proposed a new definition for kcliques on temporal clique and an algorithm for temporal kclique enumeration based on the definition.

- Proposing a new definition for kclique on temporal clique
- Designing an algorithm for temporal kclique enumeration

A Distributed Algorithm for Kclique Percolation

Zebin Ren, Ronghua Li, GuorenWang

- Pending Chinese Patent, Sept 2021
- Designing and implementing a distributed algorithm for kclique percolation

Internship

Graph Database Team   *Dec.2020 - June.2021*
Intern at Bytedance

Designing and implementing an auto-testing system and some daily maintenance such as data bulk load, the back-end of the graph database's website and SDK

- Designing and implementing an auto-testing system
- Adding features to the data bulk load system, and the back-end of the graph database's website
- Some daily maintenance such as the SDK