

Bowen Li

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PROFESSION SUMMARY

Experienced and self-motivated Ph.D. students in computer science. Research interests include data mining, machine learning, and database. Competencies include C/C++ programming, graph data mining, and mathematical analysis. Proven ability to produce positive results with a track record of academic and professional success.

EDUCATION

Florida State University Aug. 2017 – Aug. 2019
Ph.D. in Computer Science

Florida State University Aug. 2017 – Aug. 2019
Master of Science in Computer Science 3.81/4

East China University of Science and Technology Aug. 2012 - Jun. 2016
Bachelor of Engineering in Computer Science and Technology

Related Courses: Data Structures, Database System, Algorithms, Machine Learning, Concurrent and Distributed Programming, Operating Systems, Analytic Methods, Computer Architecture, Data Communications, Data Mining.

SKILLS

- **Programming Language:** C/C++, Python, Shell Script, Java
- **Tools:** Hadoop, Mysql, Tomcat, Xcode, Pycharm, Eclipse, Visual Code

HONORS/ACTIVITIES

- National Undergraduate Science and Technology Innovation Contest 3rd Prize 2013
- Outstanding Undergraduate Thesis Research Award 2016
- Course Excellent Award 2013, 2014, 2016
- Florida State University Teaching and Research Assistant Scholarship 2018-Present

RESEARCH EXPERIENCE

Tree Similarity Search Nov. 2019 – May 2020

- Improved the running time of similar tree searches by using C++. Proposed mapping zone and histogram combined algorithm to solve the similar tree search on tree edit distance.
- Running time reduces 20% compared to the previous algorithm and without any space cost increment.

Interactive Graph Search Jul. 2020 – Nov. 2020

- Reduce the cost of interactive graph search by introducing the log files. With an oracle to answer yes/or, the goal is to find the targeted node on a graph by continuously asking the oracle. I proposed the first algorithm which will use the previous research result to guide the future search.
- Implemented with Python in pre-processing data and C++ for algorithms. The total number of asked questions to the oracle was reduced by 15%.

Randomized tree similarity search Jan. 2021 - Present

- Proposed the first randomized algorithm for similar tree search by introducing the locality-sensitive hashing(LSH). The similar nodes will be hashed into the same bucket with high probability. If the number of two trees share the nodes within the same buckets beyond the given threshold, they can be the final result.
- Implemented in C++. Currently can reduce 7.4% running time with 91% accuracy. Future improvements are under development.

WORKING EXPERIENCE

Teaching Assistant Aug. 2018 – Present

Florida State University

- Programming: COP3014 Programming I(C++), COP3330: Object-oriented Programming in C++.
- Algorithm: COP4531 Algorithm and Data Structure.
- Database: COP4710 Theory and Structure of Databases.

Project Lead Feb. 2016 - Jul. 2016

Shanghai KuiBu (Startup company)

- Established the full back-end information system to manage user input and output, do tag tracking, and external data feed integration and synchronization.
- Defined database schema benchmarked system performance, optimized and balanced system loading.
- The highest page view once reached 3000 people per day.

Software Engineer Intern Nov. 2015 - Feb. 2016

Shanghai Boke Information Co.

- Developed applications to seal different business APIs for users, which makes them easier to build a platform for managing business information.