Shanshan Han

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Education

Harbin Institute of Technology (HIT, member of C9 League) Harbin, China
Master of Philosophy, Computer Science 2015.09-2017.07

- Research Topic: Data Mining, Data Management. Advisor: Prof. Hongzhi Wang.

Harbin Institute of Technology (HIT, member of C9 League) Harbin, China
Bachelor of Engineering, Software Engineering. *Honor Graduate.* 2011.09-2015.07

- GPA: 3.27, Advanced GPA: 3.53, Ranking: 24/123.
- Courses: Data Structure and Algorithms, Principles of Compiling, Linear Algebra, Probability and Statistics, Mathematical Analysis, Discrete Mathematics.

Publications

[1] **Shanshan Han**, Hongzhi Wang, Jialin Wan, Jianzhong Li. **An Iterative Scheme for Leverage-based Approximate Aggregation**. *Submitted to ICDE, 2019*. [Paper]
[2] Jialin Wan, Siyao Cheng, **Shanshan Han**, Jianzhong Li. **Optimal Scheduling of Friendly Jammers for Securing Wireless Communication**. [Paper]
[3] **Shanshan Han**, Hongzhi Wang, Hong Gao, Jianzhong Li, Shenbin Huang. **Fuzzy Keywords Query**. *Asia-Pacific Web Conference*, 2016.
[4] **Shanshan Han**, Hongzhi Wang. Leverage-based Extreme Value Aggregation. *In progress.*
[5] Book: **Big Data Analysis.** *Participated in preparation.* Author: Hongzhi Wang. *To be published.*

Professional Experience

Research Assistant @ Massive Data Computing Research Center 2015.08-2017.07
Interest Area: Data Mining, Data Management; Advisor: Prof. Hongzhi Wang

Topic: Leverage-based AVG aggregation on Big Data.

- Proposed a novel methodology to obtain a high-precision estimation, which involves generating two estimators using different methods to process constrained modulations iteratively.
- Applied iterative leveraging to data management for the first time.
- Proposed a sophisticated leverage strategy which considers the nature of data.

Topic: Leverage-based extreme value aggregation on Big Data. In Progress.

- Used leverages to generate different sampling rates which considers the local variance and the general conditions of the data blocks.
- Obtained the estimated extreme value without guessing the overall distribution of the data.
- The only related work is the best paper of VLDB 2007, and recently I am focusing on implementing their codes.

Internship and Work Experience

Research and Development Engineer @ CMB Network Technology, Hangzhou, China 2017.7-Present

- Participated in developing CMB (China Merchants Bank) Assets Entrusting Platform.

Full-Time Intern @ Baidu, Inc, Beijing, China 2014.7-2015.5

- Developed a platform which provides monitor services to app developers.
- Mainly worked on app crash analysis, monitor, and product management.
- Accomplished my graduate project. [Website]

Summer Intern @ Neusoft, Dalian, China 2013.7-2013.8

- Participating in developing a financial management system.
- Realized the financial management function and the financial analysis function.

Honors and Awards

- First-Class Postgraduate Scholarship (twice)
- Excellent Graduate Award @ HIT
- Top-10 of Baidu Hackathon
- Second Prize of Blue Bridge Cup National Information Technology Competition
- Third-Class People's Scholarship
- Outstanding Individual Award for Scientific and Technological Innovation
- Successful participant of Intel Cup National Software Innovation Contest
- Second-Class People's Scholarship

Projects

Movie Sales Prediction. [Code]
Java, Regression and Prediction, Gradient Boost Decision Tree

- Predicted the two-week sales of the upcoming movies using the movies' information, including the type, developer, actor, director, and popularity.
- Trained the predictor using the movie information and the sales of the last five years.
- Used GBDT to improve the accuracy of the model.

K-shortest Paths. [Video]
Java, greedy algorithm

- Computed single-source K-shortest paths for a graph with non-negative edge cost.

Spirograph. [Video]
HTML5, JavaScript, the Intel Cup Contest project

- Developed a graphic tool to generate beautiful mathematical roulette curves.
- Inspired by the traditional Chinese folk toy, Spirograph.

Simple Instant Messaging Software. [Video]
Java, TCP for file transfer, UDP for text messages

- Developed an instant messaging software which can send text messages and transfer files.

[HERE] are more projects.

Patents

- **Shanshan Han**, Hongzhi Wang, Jialin Wan. A Method of Leverage-based AVG Aggregation on Big Data, China Patent, Patent Number: 2017101754584.

Leadership and Student Activities

Vice-Principle Second Violin of HIT Philharmonic Orchestra 2012 – 2016

- Participated in various important performances, including HIT Symphonic Music Festival and tours around the Heilongjiang Province, for over 20 times.
- Won the Third Prize (China) and First Prize (Heilongjiang Province) in the 3rd National Art Performance.

Monitor of the Massive Data Research Center, HIT 2015 – 2017

- Organized various activities, including the new year party and the spring outing.

Skills and Interests

Programming Skills: C, C++, C#, Java, JavaEE, JavaScript, HTML, CSS
Database: SQL, MySQL, Oracle, DB2
Interests: Violin, Classical Music, Yoga