HUIMING QU

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OBJECTIVE

I am an experienced software engineer, researcher, and technical communicator. My objective is to work on advanced R&D projects.

QUALIFICATIONS

I research, design and prototype new ideas in data management systems.

- o Ph.D. thesis research on Web databases and Real-time databases (admission control, CPU scheduling, concurrency control to balance Quality of Service and Quality of Data).

- o Research on data mining, in particular, graph based link analysis and anomaly detection.

I have in-depth knowledge and extensive development experiences with databases.

- o 4 years Java development experience of a prototype system to simulate a full-fledged in-memory web-database.

- o Experience of processing millions of NYSE and NASDAQ Trades and Quotes data sets using Python and Perl.

- o 3 years application development experience on database systems: Sybase, Microsoft SQL server, and Oracle.

- o 2 years kernel development experience using C++ on OpenBASE Mini (a mobile database system deployed on palm OS or windows CE).

- o Experience with data analysis using Matlab.

EDUCATION

University of Pittsburgh, Pittsburgh, PA   Aug 2007 (exp)

Ph.D., Computer Science, GPA: 3.8/4.0

Thesis: Managing Query and Update Transactions under Quality Contracts in Web-Databases

Northeastern University, Shenyang, China   Jul 2000

B.S., Computer Science and Technology, GPA: 3.9/4.0

Award: Outstanding Graduate of Northeastern University

PROFESSIONAL EXPERIENCE

User-centric Web databases in a e-Trading system   Jun 2005 – now

Research Assistant, Advanced Data Management Lab, University of Pittsburgh

- Built a comprehensive in-memory web database simulation using Java (over 10K lines of source code).

- Designed a real-time transaction scheduling scheme [2, 3] and an admission control algorithm [4] to balance response time and data freshness in e-Trading systems.

- Built a prototype for user-centric web servers on NYSE Trades and Quotes data set, including different CPU scheduling schemes, concurrency control mechanisms, and admission control algorithms [1].

Graph mining towards Relevance Search and Anomaly Detection   Jan 2005 – Dec 2005

Class project, Carnegie Mellon University

- Proposed a neighborhood formation and anomaly detection algorithm using random walk with restart.

- Applied on several large social networks datasets through Matlab and C++ implementation.

Mobile Data Management System   Sep 2000 - Jul 2002

Software Engineer, Data Management Dept., Middleware Technologies Co., Neusoft Group, China.

- Developed a replication module for OpenBAES Mini (a mobile database management system for mobile devices with palm OS or windows CE) to synchronize its data with heterogeneous main database systems such as Sybase, Microsoft SQL, and Oracle.

- Designed and implemented a clinical mobile data management system using OpenBASE Mini for the Clinical Institute of China Medical University.

Management Information System (MIS) & Data Dissemination   Oct 1998 - Sep 2000

Research Assistant, Computer Network Lab, Northeastern University, China.

- Designed and implemented the Management Information System (MIS) using Sybase for Liaoxi Bohai Structural Material Co.

- Designed and implemented a data dissemination algorithm for the automotive control system of Yingko Power Plant.

Teaching Computer Science Courses   Sep 2002 - Apr 2005

Teaching Assistant, Dept. of Computer Science, University of Pittsburgh

- Designed and graded homework, projects, & exams and held recitations & office hours.

- Courses covered: Intermediate Programming using Java, Data Structures, Operating Systems, Theory of Computation, and Computer Architecture.

PUBLICATIONS

1. J. Xu, Q. Li, **H.Qu**, A. Labrinidis. Towards a Web Page Crawler with Content Providers' Multi-level Collaboration. In Proceedings of the Tenth International ACM Workshop on the Web and Databases (**WebDB'07**) held in conjunction with the SIGMOD'07, Beijing, China, June 2007 (to appear).

2. **H. Qu**, J. Xu, A. Labrinidis. Quality is in the eye of the beholder: Towards User-Centric Web-Databases. In Proceedings of the ACM SIGMOD International Conference on Management of Data (**SIGMOD'07**), Beijing, China, June 11-14, 2007 (Demo) (to appear).

3. **H. Qu**, A. Labrinidis. Preference-Aware Query and Update Scheduling for Web-Databases. In Proceedings of 23rd IEEE International Conference on Data Engineering (**ICDE'07**), Istanbul, Turkey, April 16-20, 2007.

4. A. Labrinidis, **H. Qu**, J. Xu. Quality Contracts for Real-Time Enterprises. In Proceedings of Business Intelligence for the Real Time Enterprise (**BIRTE'06**) held in conjunction with VLDB'06, Seoul, Korea.

5. **H. Qu**, A. Labrinidis, D. Mosse. UNIT: User-centric Transaction Management in Web-Database Systems. In Proceedings of 22nd IEEE International Conference on Data Engineering (**ICDE'06**), Atlanta, GA, April 3-7, 2006.

6. J. Sun, **H. Qu**, D. Chakrabarti, C. Faloutsos. Relevance Search and Anomaly Detection in Bipartite Graphs. **SIGKDD Explorations**, Special Issue on Link Analysis, 7(2): 48-55, 2005.

7. J. Sun, **H. Qu**, D. Chakrabarti, C. Faloutsos. Neighborhood Formation and Anomaly Detection in Bipartite Graphs. In Proceedings of the International Conference on Data Mining (**ICDM'05**), Houston, Texas, November 27-30, 2005.

8. Bachelor of Science Thesis. On generating Dynamic Execution Queues of Data Streams. September, 2000.

HONORS

2007 Best Poster Award at the 7th Annual Computer Science Day, University of Pittsburgh

2001 Neusoft Group Ltd. Scholarship

1996~2000 Excellent Student Scholarship

1998 Northeastern University Excellent Student Leader

1996 Privilege to enter Northeastern University, waived of the entrance test

PROFESSIONAL SERVICE

- External Reviewer for International Conference on Data Engineering (ICDE), International Conference on Mobile Data Management (MDM), Very Large Data Bases Conference (VLDB)

- Coordinator of the weekly DB lab meeting and the monthly University of Pittsburgh/Carnegie Mellon University joint meeting on database systems (Fall 2005 - present)

REFERENCES

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