

ZeyuanShang

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Research Interest

Large-scale Data Analytics, Big Data Management, Database Systems

Education

Brown University

Providence, RI, USA

FIRST YEAR PH.D. STUDENT, COMPUTER SCIENCE DEPARTMENT

Aug. 2017 - Now

- Advisor: Prof. Tim Kraska

Tsinghua University

Beijing, China

B.ENG IN COMPUTER SCIENCE

Aug 2011 - Jun 2015

- Advisor: Prof. Guoliang Li
- Major GPA : 91/100
- Undergraduate Thesis: *K-Join: Knowledge-Aware Similarity Join*(Outstanding Undergraduate Thesis)
- Graduated with Distinction

Experience

Hulu

Beijing, China

FULLTIME SOFTWARE DEVELOPER

Jan. 2016 - June. 2017

- Designed and implemented a streaming ingest framework using Spark Streaming, Kafka and HBase, which has been deployed into product
- Designed and implemented a realtime platform for monitoring the status of cluter, usage of HDFS and data statistics in HBase
- Designed and implemented a data dumping pipeline on Spark supporting UDF, task scheduling along with a fancy UI based on React
- Maintained and improved a real-time distributed OLAP query engine for Parquet-like nested data (e.g., supporting more aggregation operations, filter pushdown and code generation)
- Maintained and improved a data management platform for marketing team and research team (e.g., writing MapReduce code for batch pipeline, programming ETLs to load and dump data, improving web portal's UI)
- Rewarded several promotions for hard work, dedication and excellent performance

Publications

DITA: Distributed In-Memory Trajectory Analytics

ZHEYUAN SHANG, GUOLIANG LI, ZHIFENG BAO

- (To Appear) SIGMOD 2018

DIMA: A Distributed In-Memory Similarity-Based Query Processing System

JI SUN, ZHEYUAN SHANG, GUOLIANG LI, DONG DENG, ZHIFENG BAO

- VLDB 2017 (Demo Paper)
- Full paper submitted to ICDE 2018

K-Join: Knowledge-Aware Similarity Join

ZHEYUAN SHANG, YAXIAO LIU, GUOLIANG LI, JIANHUA FENG

- IEEE Transactions on Knowledge and Data Engineering (TKDE), 2016
- ICDE 2017 (Extended Abstract)

Projects

IDEA: Interactive Data Exploration Accelerators

DATABASE GROUP, BROWN UNIVERSITY

- Built several components of the project: infrastructure for accessing and processing data, pipeline for training and testing data, back-end RPC service for interacting with front-end
- Helped design and implement the rule-based optimizer, a component which automatically finds the optimal solution to prediction problems
- Adopted the agile development technique based on my industry experiences to help coordinate the rapid progress of the project for the whole team.

Fast ETL

DATABASE GROUP, BROWN UNIVERSITY

- Implemented a CSV reader that inferred the data schema automatically by sampling data, and generated native C code to read CSV data using its schema to improve performance.
- Implemented some benchmarks in Spark for comparison with our implementation.
- Set up the continuous integration of our system, using Docker and Travis.

Honors & Awards

2017	Graduate Fellowship , Computer Science Department, Brown University	<i>Providence, RI, USA</i>
2015	Outstanding Graduate(10/124) , Computer Science Department, Tsinghua University	<i>Beijing, China</i>
2015	Outstanding Undergraduate Thesis Award(6/124) , Tsinghua University	<i>Beijing, China</i>
2013, 2014	Academic Excellence Scholarship(10/124) , Tsinghua University	<i>Beijing, China</i>
2014	First Prize, Challenge Cup(Top Prize for Innovation) , Tsinghua University	<i>Beijing, China</i>