

# Zeyuan Shang

Providence, RI, USA

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## Research Interest

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

## Education

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### Brown University

Providence, RI, USA

FIRST YEAR PH.D. STUDENT, COMPUTER SCIENCE DEPARTMENT

2017 - Now

- Advisor: Prof. Tim Kraska

### Tsinghua University

Beijing, China

B.ENG IN COMPUTER SCIENCE

2011 - 2015

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

## Experience

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### Hulu

Beijing, China

FULLTIME SOFTWARE DEVELOPER

2015 - 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 cluster, 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

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### 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

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## 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

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