

Longbin Lai

Building K17, School of Computer Science and Engineering, UNSW, Australia

☎ (+61) 420 600 521 | ✉ longbin.lai@gmail.com

Summary

An enthusiastic and dedicated programmer with exceptional work ethics. Interned in Alibaba Cloud Computing Corporation. Over seven years' academic and engineering experiences with Hadoop (MapReduce). Proficient in Algorithms. Outstanding academic publications in big graph processing.

Skills

Programming Java (expert), C++ (expert), Python (prior experience) and Scala (prior experience)

Big Data Hadoop (expert), Spark (proficient), Hive (prior experience) and Giraph (prior experience)

Web Yii2 on Php, Django on Python

Experience

Google Inc.

Mountain View, CA, USA

TECH INTERN

Jan. 2017 - Apr. 2017

- Designed and implemented an emulator that simulates the Google backbone network and the routing strategies for testing, debugging and routing validation.

School of Computer Science and Engineering, UNSW

Sydney, Australia

PHD CANDIDATE, INDEPENDENT RESEARCH PROJECT

Jul. 2013 - present

- (**TwinTwigJoin**) Increased the performance of subgraph enumeration by up to an order of magnitude compared to the state-of-the-art by applying a decomposition-and-join framework in MapReduce.
- (**SEED**) Further improved the TwinTwigJoin by more than one order of magnitude by using a more advanced graph data storage mechanism (extending the traditional adjacency list) and an optimal join structure.

Department of Advertising and Searching, Alibaba Cloud Computing Corporation

HangZhou, China

RESEARCH INTERN, TEAM PROJECT

Jan. 2012 - Sep. 2012

- Designed and implemented a web recommendation system based on Alibaba cloud computing system (MapReduce-like system), which serves over 1000 top websites in China.
- Improved the throughput of the recommendation system to over 2 billion records per hour via a well-designed MapReduce data flow.
- Implemented a prototype of web classification algorithm that is twice faster than existing algorithm by solely using the url of the web page.

IBM Share-With-University Project

Shanghai, China

RESEARCH ASSISTANT, PROJECT LEADER

Oct. 2009 - Oct. 2010

- Saved the storage overhead of Hadoop File System (HDFS) by up to 30% without compromising the storage reliability by replacing the full replication mechanism with erasure coding.
- Improved the performance of Hadoop streaming utility (allowing coding with languages other than Java) by over 60% by replacing the synchronized inter-process communication module in Linux with desynchronized single-read-single-write queue.

Education

The University of New South Wales, Australia (UNSW)

PH.D. IN COMPUTER SCIENCE

Sydney, Australia

Jul. 2013 - present

- All courses Highly Distinguished

Shanghai Jiao Tong University (SJTU)

M.S. IN COMPUTER TECHNOLOGY

Shanghai, China

Sep. 2010 - Mar. 2013

- GPA 3.8 / 4.0, China's National scholarship, Top 2%

Shanghai Jiao Tong University (SJTU)

B.S. IN INFORMATION SECURITY

Shanghai, China

Sep. 2006 - Jun. 2010

- GPA 3.6 / 4.0, twice B-class SJTU academic scholarship, Top 15%

Publications

Scalable Distributed Subgraph Enumeration

LONGBIN LAI, LU QIN, XUEMMIN LIN, YING ZHANG, LIJUN CHANG

*VLDB 2017, ERA A**

To appear

Scalable Subgraph Enumeration in MapReduce, An Extension

LONGBIN LAI, LU QIN, XUEMMIN LIN, LIJUN CHANG

*VLDB Journal, ERA A**

Under Revision

Scalable Subgraph Enumeration in MapReduce

LONGBIN LAI, LU QIN, XUEMMIN LIN, LIJUN CHANG

*VLDB 2015, ERA A**

PVLDB Volume 8, Issue 10

ShmStreaming: A shared memory approach for improving Hadoop streaming performance

LONGBIN LAI, JINGYU ZHOU, LONG ZHENG, HUAKANG LI, YANCHAO LU

AINA 2013, ERA B

Honors & Awards

2012	Top 1% , China's National Scholarship	<i>SJTU, China</i>
2011	Top 4% , Tencent Academic Scholarship	<i>SJTU, China</i>
2010	Top 10% , Outstanding Graduate of Shanghai Jiao Tong University	<i>SJTU, China</i>
2009	Top 6% , Sony Academic Scholarship	<i>SJTU, China</i>
07, 08	Top 15% , B-Class SJTU Academic Scholarship	<i>SJTU, China</i>