

Wenkai Jiang

PH.D. CANDIDATE · COMPUTER SCIENCE

Room 706, Doug McDonell Building, The University of Melbourne, VIC, Australia

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Education

The University of Melbourne

PH.D. CANDIDATE IN COMPUTER SCIENCE

- Recipient of Full Fee Remission and Living Allowance Scholarships (MIFRS and MIRS)

Melbourne, VIC, Australia

September 2015 - PRESENT

Tsinghua University

B.E. IN AUTOMATION

- GPA 86.7/100
- Excellent Bachelor's Thesis in the Department of Automation, top 5%
- Excellent graduate in the Department of Automation, top 30%

Beijing, P.R.China

September 2011 - July 2015

Experience

The University of Melbourne

PH.D. CANDIDATE (DISTRIBUTED DATA PROCESSING)

- Studying topics in distributed data processing, machine learning, and spatial data management and mining
- Developing original ideas that may improve the efficiency of distributed data processing techniques by an order of magnitude
- Currently **1** paper is under review in prestigious conference and **1** paper is under review in top-tier peer review journal
- Served as reviewer for leading academic venues including IEEE TKDE, IEEE TCC, and IEEE/ACM ASONAM

Melbourne, VIC, Australia

September 2015 - PRESENT

The University of Melbourne

TUTOR

- COMP10002 Foundations of Algorithms 2016,2018: taught basics of C to undergraduates
- COMP90041 Programming and Software Development 2016: taught basics of Java and software engineering to postgraduates
- COMP20005 Engineering Computation 2016: taught basics of C and engineering computing algorithms to undergraduates

Melbourne, VIC, Australia

February 2016 - October 2016

Technology Lab, Accenture PLC

RESEARCHER & SOFTWARE ENGINEER INTERN (MANAGER: DR. YAN GAO)

- Assisted on analysing users' activities and often-visited areas based on trajectories extracted from mobile phone data
- Implemented an efficient data processing and storage system for large scale geographical information such as up to 2 billion points of interest in Beijing, Singapore and London
- Developed an online recommending system that recommends points of interest around users to them based on their visiting history

Beijing, P.R.China

January 2015 - June 2015

The University of Melbourne

RESEARCH ASSISTANT (SUPERVISOR: A/PROF. RUI ZHANG)

- Conducted research on different approaches used in text feature extraction under various scenes extracted from real life
- Implemented a text recognition pipeline for extracting, cleaning, detecting, and recognizing text in scenes with complex background
- Developed a face recognition system that achieves high accuracy while crawling portrait images from web pages

Melbourne, VIC, Australia

July 2014 - October 2014

Projects

HyperX: A Scalable Hypergraph Partitioning and Learning Framework

COLLABORATE

- Designed and developed a novel distributed framework for efficient and effective hypergraph learning and processing
- Tackled challenges of inflated data size, enormous replication cost, and difficulty in balancing distributed workloads
- Implemented in Scala on Spark, which is orders of magnitude faster than Spark's GraphX
- This work is under review with IEEE TKDE journal

February 2016 - PRESENT

Database as a Service (DBaaS) on Public Cloud

COLLABORATE

September 2016 - PRESENT

- Proposed a novel Trinity Model that can significantly accelerate database design and development on public cloud
- Explored issues among current DBaaS providers, namely, long learning curve and development cycle, lacking of integration with NoSQL database, and less support for security and privacy
- Designed ongoing and future work on developing large real-world Software as a Service using Trinity Model
- This work is under review with IEEE ICSE conference

Honors & Awards

SCHOLARSHIPS

- | | | |
|------|---|---------------------------|
| 2015 | MIEA , Recipient of Melbourne International Engagement Award | <i>Australia</i> |
| 2014 | 3500USD , Scholarship for excellent undergraduate student to study abroad awarded by China Scholarship Council | <i>Beijing, P.R.China</i> |
| 2014 | 500USD , Scholarship for excellent performance in academic | <i>Beijing, P.R.China</i> |

AWARDS

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|------|--|---------------------------|
| 2013 | 4th among 36 teams , Electronics Design Competition in Tsinghua University | <i>Beijing, P.R.China</i> |
| 2012 | 1st among 13 teams , Robot Innovation Design Competition in Tsinghua University | <i>Beijing, P.R.China</i> |

Skills

- | | |
|----------------------|---|
| Speciality | AutoCAD, Verilog, Matlab, Java |
| Knowledgeable | VHDL, Protel, Solidwork, JavaScript |
| Exposure | C/C++, Python, MongoDB, AWS |
| Communication | English (Superior), Chinese Mandarin (Native Speaker) |