Zhipeng Jia

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INTRODUCTION

I am a final-year PhD student in computer science from The University of Texas at Austin, where I am advised by Professor Emmett Witchel.

I have a broad interest in system designs, from low-level hardware (such as GPUs) to scalable distributed systems. My PhD work includes secure usage of cloud GPUs [NSDI '20], microservices on FaaS [ASPLOS '21], and scalable distributed log storage [SOSP '21].

Before my PhD, I also had experience in practical machine learning. I was a research intern at Microsoft Research Asia during my undergraduate, working on ML for medical data. In Summer 2018, I worked with Google News team on DNN-based news clustering algorithms.

EDUCATION

The University of Texas at Austin, Austin - *Ph.D. in Computer Science*

Aug 2017 - Aug 2022 (expected)

Admitted to the Ph.D. program with the 4-year Provost's Graduate Excellence Fellowship

Tsinghua University, Beijing - *B.Eng. in Computer Science and Technology*

Aug 2013 - Jun 2017

Enrolled in Yao Class, the pilot computer science program advised by Turing Award laureate Professor Andrew Yao

PUBLICATION

Boki: Stateful Serverless Computing with Shared Logs

***Zhipeng Jia**, Emmett Witchel*

The 28th ACM Symposium on Operating Systems Principles (SOSP '21), 2021

Nightcore: Efficient and Scalable Serverless Computing for Latency-Sensitive, Interactive Microservices

***Zhipeng Jia**, Emmett Witchel*

The 26th ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS '21), 2021

Telekine: Secure Computing with Cloud GPUs

*Tyler Hunt, **Zhipeng Jia**, Vance Miller, Ariel Szekely, Yige Hu, Christopher J. Rossbach, Emmett Witchel*

The 17th USENIX Symposium on Networked Systems Design and Implementation (NSDI '20), 2020

Isolation and Beyond: Challenges for System Security
*Tyler Hunt, **Zhipeng Jia**, Vance Miller, Christopher J. Rossbach, Emmett Witchel*
The 17th Workshop on Hot Topics in Operating Systems (HotOS XVII), 2019

Constrained Deep Weak Supervision for Histopathology Image Segmentation
***Zhipeng Jia**, Xingyi Huang, Eric I-Chao Chang, Yan Xu*
IEEE Transactions on Medical Imaging, 2017

Large Scale Tissue Histopathology Image Classification, Segmentation, and Visualization via Deep Convolutional Activation Features
*Yan Xu, **Zhipeng Jia**, Liang-Bo Wang, Yuqing Ai, Fang Zhang, Maode Lai, Eric I-Chao Chang*
BMC Bioinformatics, 2017

Efficient Near-optimal Algorithms for Barter Exchange
***Zhipeng Jia**, Pingzhong Tang, Ruosong Wang, Hanrui Zhang*
16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-17), 2017

Deep Convolutional Activation Features for Large Scale Brain Tumor Histopathology Image Classification and Segmentation
*Yan Xu, **Zhipeng Jia**, Yuqing Ai, Fang Zhang, Maode Lai, Eric I-Chao Chang*
40th International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2015

EXPERIENCE

Katana Graph, Austin - *Software Engineer Intern*
May 2021 - Aug 2021

- Katana Graph is an Austin-based startup focusing on high performance graph processing and analytics, founded by UT professors Keshav Pingali and Christopher J. Rossbach
- Worked on transaction support for large-scale graph updates

Google, Sunnyvale - *Research Intern*
May 2019 - Aug 2019

- Worked with Platform team
- Worked on the project of understanding RPC latency in Plaque

Google, Mountain View - *Software Engineering Intern*
May 2018 - Aug 2018

- Worked with Google News team
- Launched new machine learning-based news labeling system

Microsoft Research Asia, Beijing - *Research Intern*
Mar 2016 - Jun 2017

- Worked with Technology Strategy group under the mentorship of Dr. Eric Chang
- Involved in the project of sleep analysis with Microsoft Band
- Involved in the project of automatic analysis of large-scale medical images
- Awarded Star of Tomorrow Internship Award

Google, Mountain View - *Software Engineering Intern*

Jul 2015 - Sep 2015

- Worked with Machine Perception team under the supervision of Dr. Hui Fang
- Designed and implemented a deep-learning-based image enhancement framework

Microsoft Research Asia, Beijing - *Research Intern*

Feb 2014 - Mar 2015

- Worked with Technology Strategy group under the mentorship of Dr. Eric Chang
- Involved in the project of automatic analysis of large-scale medical images
- Involved in the project of Chinese OCR specialized for recognition of subtitles

HONORS & AWARDS

2017 - 2021	Provost's Graduate Excellence Fellowship, The University of Texas at Austin
2013 - 2017	Outstanding Freshman Scholarship (second prize), Tsinghua University
2017	Star of Tomorrow Internship Award, Microsoft Research Asia
2015	Gold Medal in the 2015 ACM-ICPC Asia EC-Final Contest (ranking 7th out of 267)
2014	Gold Medal in the 2014 ACM-ICPC Asia Shanghai Regional Contest (ranking 3rd out of 132)
2014	Gold Medal in the 2014 ACM-ICPC Asia MuDanjiang Regional Contest (ranking 2nd out of 146)
2013	Gold Medal in the 2013 ACM-ICPC Asia Changsha Regional Contest (ranking 4th out of 182)
2012	Gold Medal in the 2012 National Olympiad in Informatics (ranking 3rd out of 292)
2011	Gold Medal in the 2011 National Olympiad in Informatics (ranking 6th out of 294)
2010	Gold Medal in the 2010 National Olympiad in Informatics (youngest gold medalist)
2009	Gold Medal in the 2009 National Olympiad in Informatics (youngest gold medalist)