Yifei Liu

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RESEARCH INTERESTS

My research interests include distributed systems, file/storage systems and machine learning for systems. I am currently looking for Computer Science Ph.D. openings in Fall 2019.

EDUCATION

Huazhong University of Science and Technology Wuhan, Hubei, China

- Master of Science (M.Sc.) in Computer Architecture Sep 2016 – Jun 2019 (Expected)
  - Adviser: Prof. Ke Zhou
  - Research areas: Distributed Systems, Storage System and Machine Learning Interaction, Graph Mining.
  - Cumulative GPA: 85.2 / 100 Rank: 11/52

Huazhong Agricultural University Wuhan, Hubei, China

- Bachelor of Engineering (B.Eng.) in Computer Science and Technology Sep 2012 – Jun 2016
  - Supervisors: Prof. Jianxiao Liu & Prof. Ruifang Zhai
  - Thesis: *Predicting Disk Failures based on Machine Learning Methods*
  - Cumulative GPA: 3.43 / 4.00 Major GPA: 3.79 / 4.00 Rank: 9/118

EXPERIENCE

Wuhan National Laboratory for Optoelectronics Wuhan, Hubei, China
Master Student/Research Assistant Sep 2016 – Now

- Design and implement a metadata system for integrating high-precision and low-latency semantic queries in storage systems using deep learning hash
- Propose a framework for lightening and assessing image "dark data" based on a novel semantic hash ranking (SHR) algorithm
- Perform theoretical analysis of hash-based graph and rank to instruct graph-based rank algorithms

Tencent Shenzhen, Guangdong, China
Backend Developer Intern Dec 2015 – Aug 2016

- Predict disk failures with collected disk data via machine learning algorithms for achieving both high precision and recall
- Build the infrastructure for collecting long-term disk S.M.R.A.T. data from ten thousand servers from Tencent data centers
- Test cache replacement policies on Tencent real application traces

Institute of Computing Technology, Chinese Academy of Sciences Beijing, China
Intern/Visiting Student Nov 2015 – Dec 2015

- Explore the correlation between Apache Spark and Java Garbage Collection (GC) parameters

Chinasoft International Guangzhou, Guangdong, China
Front-end Student Intern Jul 2015 – Aug 2015

- Develop a catering website with my teammates using jQuery, AJAX, Java Servlet

Huazhong Agricultural University Wuhan, Hubei, China
Undergraduate Research Assistant Nov 2014 – Jun 2015

- Propose a web service recommendation approach for organizing and recommending a set of correlated services using Bayesian Network Reasoning
- Design an image line detection algorithm for automatically measuring character parameters of the rapeseed plant
- Develop a GUI for counting numbers of cotton cells in microscopic images (supported by College of Plant Sci. & Tech. of Huazhong Agricultural University)

PUBLICATIONS

[5] <u>Yifei Liu</u>, Yu Liu, Yangtao Wang, Ke Zhou and Yujuan Yang, "SwiftGraph: a new metadata organization approach for enabling semantic queries in storage systems via deep learning hash," **to be submitted**

[4] Yangtao Wang, Yu Liu, <u>Yifei Liu</u>, Ke Zhou and Yujuan Yang, "Analysis and Management to Hash-Based Graph and Rank," **to be submitted**

[3] Yu Liu, Yangtao Wang, Ke Zhou, Yujuan Yang, <u>Yifei Liu</u> and Zhili Xiao, "An Effective Framework for Image Dark Data Lightening and Assessing," **to be submitted**

[2] Jianxiao Liu, Zonglin Tian, <u>Yifei Liu</u> and Liang Zhao, "Research of Web Service Recommendation Using Bayesian Network Reasoning," in *Proceedings of the International Conference on Services Computing*(**SCC**), Seattle, WA, Jun 2018.

[1] Pujuan Shi, <u>Yifei Liu</u>, Yihang Fang, Chengda Lin and Ruifang Zhai, "A new line detection algorithm - Automatic measurement of character parameter of rapeseed plant by LSD," in *Proceedings of the 4th International Conference on Agro-Geoinformatics*, Istanbul, Turkey, Jul 2015.

COMPETITION AWARDS	▪ Second Prize of National Postgraduate Mathematic Contest in Modeling Won the second-highest award of this contest, (**1732/8894 ~19.47%**)	Dec 2016
	▪ Finalist of Interdisciplinary Contest in Modeling(**USA**) One of 52 awardees in the world. First winner of my university. (**52/9773 ~0.53%**)	Apr 2015
	▪ First Prize of National Postgraduate Mathematic Contest in Modeling Won the highest award of this contest, (**120/4900 ~2.4%**)	Dec 2014
	▪ First Prize of Contemporary Undergraduate Mathematical Contest in Modeling Won the highest award of this contest, (**293/22233 ~1.3%**)	Nov 2014

ACADEMIC AWARDS	▪ Merit Graduate Student, Huazhong University of Science and Technology	2017 – 2018
	▪ First-class Academic Scholarship	2016 – 2018
	▪ Outstanding Graduate	2016
	▪ First Scholarship for Study (~4/118)	2015
	▪ Merit Undergraduate Student, Huazhong Agricultural University	2014 – 2016

SKILLS

TECHNICAL SKILLS

- Solid background in Storage Systems and Mathematical Modeling
- Proficient in C/C++/Python/MATLAB
- Familiar with Java/BASH/SQL/JavaScript
- Parallel Computing: Hadoop, Spark
- File and Storage: OpenStack Swift, HDFS, Redis, Extended File System(ext)
- Databases: HBase, SQL Server, MySQL
- Deep learning platforms: Caffe, TensorFlow
- Tools: Linux, git, gcc, gdb, pdb, Makefile, Scikit-learn, Sqoop, LaTeX

CERTIFICATION   Machine Learning(Stanford University), Coursera

TEST SCORE   **GRE**: Total 323 + 3.5 (Verbal 157 + Quantitative 166 + Analytical Writing 3.5)

TOEFL: Total 94 (Reading 28 + Listening 24 + Speaking 20 + Writing 22)

REFERENCES
- **Ke Zhou**
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  School of Computer Science and Technology
  Huazhong University of Science and Technology
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