Yuanning Gao

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EDUCATION

Shanghai Jiao Tong University (SJTU), China   Sep. 2017 – Present

Major: Ph.D. in Computer Science

Research Interests: Data Engineering, Database Management, and Optimization Algorithms

Ocean University of China (OUC), China   Aug. 2013 – Jun. 2017

Major: B.E. in Computer Science

Overall GPA: 89.36/100(3.71/4.00), Major GPA: 91.16/100(3.81/4.00)

Rank: 5/136

PUBLICATION

- **Yuanning Gao,** Xiaofeng Gao, Xiaochun Yang, Jiaxi Liu, Guihai Chen, An Efficient Ring-Based Metadata Management Policy for Large-Scale Distributed File Systems, IEEE Transactions on Parallel and Distributed Systems (TPDS), Volume 30, Issue 9, pp.1962-1974, 2019.

- Xiaofeng Gao, **Yuanning Gao,** Yichen Zhu, Guihai Chen, U2-Tree: A Universal Two-Layer Distributed Indexing Scheme for Cloud Storage System, IEEE/ACM Transactions on Networking (TON), Volume 27, Issue 1, pp.201-213, 2019.

- **Yuanning Gao,** Xiaofeng Gao, Yichen Zhu, Guihai Chen, An Efficient and Scalable Multi-Dimensional Indexing Scheme for Modular Data Centers, Data & Knowledge Engineering (DKE), Volume 123, 2019.

- **Yuanning Gao,** Xiaofeng Gao, Xianyue Li, Bin Yao, Guihai Chen, An Embedded GRASP-VNS based Two-Layer Framework for Tour Recommendation, to appear on IEEE Transactions on Services Computing (TSC), 2019. (Accepted 12/18/2019)

- **Yuanning Gao,** Jinbiao Ye, Nianzu Yang, Xiaofeng Gao, Guihai Chen, A Middle Layer Based Scalable Learned Index Scheme. Journal of Software (软件学报), Volume 31, Issue 3, 2020.

- **Yuanning Gao,** Xiaofeng Gao, Guihai Chen, DeepHash: An End-to-End Learning Approach for Metadata Management in Distributed File Systems, The 48th International Conference on Parallel Processing (ICPP), Kyoto, Japan, August 5-8, 2019.

- Shiyi Cao, **Yuanning Gao,** Xiaofeng Gao, Guihai Chen, AdaM: An Adaptive Fine-Grained Scheme for Distributed Metadata Management, The 48th International Conference on Parallel Processing (ICPP), Kyoto, Japan, August 5-8, 2019.

- Zhaorui Li, **Yuanning Gao,** Xiaofeng Gao, Guihai Chen, LearningTour: A Machine Learning Approach for Tour Recommendation based on Users' Historical Travel Experience, The 24th International Conference on Database Systems for Advanced Applications (DASFAA), Chiang Mai, Thailand, April 22-25, 2019.

- Chunwei Wang, **Yuanning Gao,** Xiaofeng Gao, Bin Yao, Guihai Chen, eTOUR: A Two-Layer Framework for Tour Recommendation with Super-POIs, The 16th International Conference on Service Oriented Computing (ICSOC), Hangzhou, Zhejiang, China, November 12-15, 2018.

RESEARCH EXPERIENCES

Machine Learning Algorithm for Indexing Design | SJTU   Jan. 2019 – present

Advisor: Xiaofeng Gao, professor, Shanghai Jiao Tong University

- Conduct survey of related studies, assist on model design and provide some key ideas for indexing design.
- Reproduce the experiments for the proposed models.

Deep Reinforcement Learning for Distributed Metadata Management, | SJTU   Jul. 2018 – Dec. 2018

Advisor: Xiaofeng Gao, professor, Shanghai Jiao Tong University

- Propose an online fine-grained DRL algorithm to address the trade-off dilemma against time-varying access pattern.
- Implement experiment code on real world dataset, and improve the adaptability for time-varying workload.

Learned Locality Preserving Hashing for Distributed Metadata Management | SJTU   Jan. 2018 – Dec. 2018

Advisor: Xiaofeng Gao, professor, Shanghai Jiao Tong University

- Propose the first machine learning algorithm to learn a more flexible mapping scheme for metadata distribution.
- Implement experiment code as well as all comparative baselines, and provide a new view for metadata management.

General Model for Distributed Indexing Design | SJTU   Apr. 2017 – Nov. 2018

Advisor: Xiaofeng Gao, professor, Shanghai Jiao Tong University

- Propose a general two-layer distributed indexing scheme for data center networks with tree-like topologies.
- Implement experiment code on Amazon EC2, and achieve great improvement compared with the comparative baseline.

Ring-Based hashing Scheme for Distributed Metadata Management | SJTU   Mar. 2017 – Jan. 2019

Advisor: Xiaofeng Gao, professor, Shanghai Jiao Tong University

- ➢ Propose a ring-based hashing scheme to the partition metadata namespace tree and serve large-scale distributed storage systems.
- ➢ Implement experiment code on three real world datasets, and improve the metadata locality and load balance degree for systems.

AWARDS AND HONORS

➢ Yang Jiachi Scholarship	2019
➢ First Prize, China Graduate Mathematical Contest in Modeling	2019
➢ Outstanding Graduates of Shandong province (*Top 2% in department*)	2017
➢ National Scholarship (*Top 2% in department, the highest scholarship for Chinese students*)	2016
➢ National Encouragement scholarship (*Twice, Top 4% in department*)	2014 and 2015
➢ Class A Scholarship in Ocean University of China (*Thrice, Top 5% in department*)	2014, 2015, and 2016
➢ Third Prize, China Graduate Mathematical Contest in Modeling	2018

SKILLS AND HOBBIES

Programming Languages: C/C++, Python, Java, Go

Hobbies: Ping-pong, Running, Reading