Yupeng Tang

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No.28, Xianning West Road, Xi'an, Shaanxi, China

Education

Yale University
Computer Science, Ph.D. *August 2020 -*

Xi'an Jiaotong University 3.9/4.3
Computer Science, Honors Science Program *Expected May 2020*

University of California, Berkeley 3.8/4.0
Berkeley International Study Program *August 2018 - May 2019*

Relevant Coursework: CS188 Introduction to Artificial Intelligence(A), CS61C Machine structure(A), CS162 Operating Systems and System Programming(A), CS161 Computer Security(A).

Research Experience

Xilinx Asia Lab Dr. Chengchen Hu, Dr. Tuan Nguyen
Research intern *February 2020 - July 2020*

- **Smart NIC**: Currently working on network congestion control based on Xilinx smart NICs

University of California, Berkeley Ph.D. Anurag Khandelwal, Prof. Ion Stoica
Undergraduate Research Assistant @ RISELAB *September 2018 - Present*

- **Jiffy**: Jiffy is a distributed memory management system that decouples memory capacity and lifetime from compute in the serverless paradigm. Work on the implementation of reliable and elastic auto-scaling functionality for the distributed memory management and make several design optimization to reduce the latency of data management.
- **Fine-grained Scheduling for Serverless Analytics**: On-going research project focusing on fine-grained scheduling for Map-reduce model using Jiffy as data plane.

Microsoft Research Asia Dr. Lintao Zhang, Dr. Qi Chen
Research intern @ Intelligent Cloud and Edge Research Group *May 2019 - August 2019*

- **MLSystem**: Combine machine learning technique with traditional operating systems structure to replace the abstraction layer and improve system performance. Analyze multiple application workflows and develop RNN based model for file prediction and page caching. Build toolkits for linux kernel and glibc hacking.

Xi'an Jiaotong University Prof. Peng Zhang
Undergraduate Research Assistant *2017 - 2018*

- **OFLearn**: OFLearn is an on-going project focusing on using machine learning strategy in network anomaly detection. Work on using neural networks to detect attacks in Software Defined Network.

Publications

- Anurag Khandelwal, **Yupeng Tang**, Rachit Agarwal, Aditya Akella, Ion Stoica. "*Jiffy: Virtual Memory for Serverless Analytics*" **Submitted to 14th USENIX Symposium on Operating Systems Design and Implementation(OSDI 2020)**.

Selected Projects

- **MoodleOT(TA project)**: Data-driven Development of Dynamic Programming Testing System Based on Moodle
  - Reconstruct Moodle database(MySQL) modules to provide robust online-test student management module and propose method for manipulating the database to provide online testing functionality. This project is currently used for undergraduate programming tests in Xi'an Jiaotong University.
- **Pintos operating system**: Berkeley CS162 course project
  - Implemented basic interrupts, multiple thread schedulers(e.g.MLFQS), user process handling, multiple system calls and fully functional file system based on FFS.

Skills & Interests

- **Languages**: C, C++, Python, Matlab, TeX, Assembly(RISC-V), PHP, Go, Shell
- **Industry Software Development:** Git, Vim, Linux, OpenCV, CUDA, Eigen, Apache thrift, Pytorch
- **Research Interests:** Distributed Systems, Operating Systems, Networking

Addtional Experience & Achievements

- University of Alberta, Canada - International Undergraduate Summer Enrichment Program in Mathematics 2017.07 - 2017.08
- TA for Progamming Fundamentals class in Xi'an Jiaotong University 2019.09 - 2019.12
- Championship in Xi'an Jiaotong University Basketball Tournament(As a starter of the college team) 2017
- Third Prize in Group Programming Ladder Tournament (National) 2018.03
- PengKang Scholarship, Xi'an Jiaotong University (Intra-school) 2017.09
- Scholarship under the State Scholarship Fund (National) 2018.05

Last updated: 2020/05/30