Yiyang Chang

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Work Experience

Researcher in System and Networking ByteDance Inc., Bellevue, WA
Manager: Dr. Chuanxiong Guo Aug 2019 – Present

Research Intern on Distributed Deep Learning Training System Microsoft Research, Redmond, WA
Manager: Dr. Jin Li May 2017 – Aug 2017
- Prototyped a distributed deep learning training system over RDMA, accelerating a production-level model training speed by 6.5X
- Contributed to TensorFlow open source project (#11416)

SDE Intern on TCP Congestion Control Microsoft, Redmond, WA
Manager: Praveen Balasubramanian May 2016 – July 2016
- Prototyped and shipped TCP CUBIC congestion control in Windows 10
- Designed experiments to demonstrate throughput improvement in data transfer

Research Intern on SDN-based Cloud Monitoring System Futurewei Technologies, Santa Clara, CA
Mentors: Dr. Shuo Yang and Dr. Haoyu Song May 2014 – Aug 2014
- Built an SDN-based cloud monitoring system with OpenStack, Ryu, and Ganglia
- Implemented a physical SDN with Pica8 switches and Ryu controller

Education

Purdue University West Lafayette, IN
Ph.D. in Computer Engineering, ECE (GPA: 3.9/4.0) Aug 2013 – July 2019
Peking University Beijing, China
B.S. in Micro-electronics, EECS (GPA: 3.6/4.0) Sept 2009 – July 2013

Research Experience

Network Performance SLOs Certification Purdue, West Lafayette, IN
Advisors: Prof. Sanjay Rao and Prof. Mohit Tawarmalani Oct 2015 – July 2019
- Built a system for certifying network performance SLOs, under various types of failures
- Built an SDN testbed emulating protection routing with Mininet and Open vSwitch.

Scalable Distributed SDN Controller Purdue, West Lafayette, IN
Advisors: Prof. Sanjay Rao and Prof. T. N. Vijaykumar Nov 2014 – July 2015
- Designed SDN controllers with functional partition instead of topological partition
- Extended Floodlight SDN controller source code to measure performance

App-specific Virtual Machine (VM) Selection in the Cloud Purdue, West Lafayette, IN
Advisors: Prof. Sanjay Rao and Prof. T. S. Eugene Ng Sept 2013 – Aug 2014
- Cost-aware VM selection based on historical workload and online measurement
- Investigated the root cause of performance variation on AWS EC2

Selected Publication

- **Yiyang Chang**, Sanjay Rao, and Mohit Tawarmalani. "Robust Validation of Network Designs under Uncertain Demands and Failures", **NSDI**, 2017 (Acceptance rate: $46/253 = 18.2\%$).

Honors and Awards

Facebook Fellowship Finalist, Facebook Inc. Jan 2018
Bilsland Dissertation Fellowship, Purdue University Jan 2018
National Scholarship, Peking University Dec 2012
Google Excellence Scholarship, Google Inc. May 2012

Languages & Technical Skills

Python (proficient), C/C++, AWS, Kubernetes, SDN, TensorFlow, Gurobi, GAMS, Git, Vim