Lianmin **Zheng**

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Education

Shanghai Jiao Tong University *Sept. 2015 - Jun. 2019 (expected)*

Bachelor in Computer Science

- Member of ACM Class, an elite CS program for top-5% of students
- GPA: 3.9/4.3 Score: 91.5/100 Rank: 1/24

Research Experiences

SAMPL Lab, University of Washington *Jul. 2018 - Dec. 2018*

Research Assistant, advised by Prof. Luis Ceze

- Topic: Compiler for machine learning and machine learning for compiler
- Worked on TVM, an end-to-end deep learning compiler stack for CPUs, GPUs and specialized accelerators
- Designed and implemented machine learning based auto-tuner for TVM
- Generated high performance operator implementations for GPU/CPU/FPGA
- Achieved state-of-the-art inference performance on a wide range of hardware platforms with our compiler

APEX Lab, Shanghai Jiao Tong University *Jul. 2017 - Present*

Research Assistant, advised by Prof. Weinan Zhang

- Topic: Deep reinforcement learning and multi-agent system
- Developed MAgent, a many-agent reinforcement learning platform
- Implemented deep reinforcement learning algorithms (DQN, DDQN, Dueling DQN, A3C) on our platforms for several challenging tasks.

Publications

Learning to Optimize Tensor Programs *NIPS 2018*

Tianqi Chen, **Lianmin Zheng**, Eddie Yan, Ziheng Jiang, Thierry Moreau, Luis Ceze, Carlos Guestrin, Arvind Krishnamurthy

TVM: An Automated End-to-End Optimizing Compiler for Deep Learning *OSDI 2018*

Tianqi Chen, Thierry Moreau, Ziheng Jiang, **Lianmin Zheng**, Eddie Yan, Meghan Cowan, Haichen Shen, Leyuan Wang, Yuwei Hu, Luis Ceze, Carlos Guestrin, Arvind Krishnamurthy

MAgent: A Many-Agent Reinforcement Learning Platform *AAAI 2018 (demo)*

Lianmin Zheng*, Jiacheng Yang*, Han Cai, Weinan Zhang, Jun Wang, Yong Yu

Optimizing Deep Learning Workloads on ARM GPU *ASPLOS 2018 (ReQuEST Workshop)*

Lianmin Zheng, Tianqi Chen

Highlighted Projects

Compiler Malic *May. 2017*

Malic is the winner compiler (1/25) with the best performance in Compiler Construction 2017 at ACM Class. It compiles a java-like language into x86-64 asm with basic optimization techniques.

goGFS: Google File System in golang *Jul. 2016*

goGFS is a simple implementation of the Google File System (GFS) in golang. It is tested with a small cluster of inexpensive machines (1 master, 12 chunkservers and 12 clients). Fault tolerance is provided.

VisNBA: Visualize the NBA data *Mar. 2017*

VisNBA is a NBA data visualization tool. It can provide visualizations at game level, player level and team level. Box-score data, SportVU trace data are all supported.

Honors & Awards

Nov. 2018 National ScholarShip **(Top 3%)**
Nov. 2017 Kaiyuan ScholarShip
May. 2017 **Meritorious Winner**, The Interdisciplinary Contest in Modeling (ICM)
Nov. 2016 National ScholarShip **(Top 3%)**
Nov. 2016 Zhiyuan Honoured Scholarship **(Top 5%)**
Nov. 2012 **First Price**, The 18th National Olympiad in Informatics in Provinces (NOIP)

Teaching Experiences

Compiler Construction

Spring 2018

Teaching Assistant

Students in this class were asked to build a compiler to compile a java-like language to x86 assembly code.
I gave several lectures, provided test case and ported gcc as performance baseline.

Principles and Practices of Computer Algorithms

Summer 2017

Teaching Assistant

I gave lectures on how to implement a simple deep learning framework in pure python with the same interface as tensorflow. The final projects from students can run simple tensorflow programs.