Benny(Xinhao) Jiang

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EDUCATION

University of California, Berkeley **GPA**: 3.91/4.00 **Aug.2017 – May 2021**
B.A. in Computer Science
B.A. in Data Science with domain emphasis in Applied Mathematics & Modeling

PUBLICATIONS

Ma, Minghua, Zheng Yin, Shenglin Zhang, Sheng Wang, Christopher Zheng, Xinhao Jiang, Hanwen Hu et al. "Diagnosing root causes of intermittent slow queries in cloud databases." Proceedings of the VLDB Endowment 13, no. 8 (2020): 1176-1189.

INTERNSHIP EXPERIENCES

Hulu **Santa Monica, CA**
Software Developer Intern(Digital Video Recording) Jun. 2020 – Aug. 2020

- Implemented a web application as a solution for faster trouble-shooting and debugging on the pipeline of 7 micro-services across 5 teams on User Platform.
- Reduced the complicated procedure of locating errors in micro-services into one simple searching platform.
- Designed and developed RESTful APIs on Flask, and intuitive and interactive user interfaces with AngularJS.
- Initiated a project team of 3 people to develop a Chrome extension that let users collect clips in TV shows.

Tsinghua University and BizSeer **Beijing, China**
Machine Learning Research Intern May 2019 – Aug. 2019

- Implemented a framework to diagnose the root causes of straggler SQL queries in large scale cloud databases.
- Co-authored and published a paper at VLDB 2020 (top conference in databases).
- Designed and developed a real-time anomaly detector system that identified and categorized KPI anomalies with over 97 F1 scores.
- Improved efficiency of algorithm experiments by leveraging MongoDB and multithread computing.

PROJECTS

PintOS, *a simple instructional operating system framework for the x86 instruction set architecture.*

- Built Pintos that supports kernel threads, kernel mode syscalls and loading and running user programs.
- Designed and integrated a Priority Scheduler that supports priority donation to prevent priority inversion.
- Implemented Fast File System including buffer cache in memory for faster accesses to files.

Multi-task Reinforcement Learning with Parameter Superposition

- Initiated a research project aiming to resolve the issue of catastrophic forgetting in multi-task deep reinforcement learning with parameter superposition.
- Applid Parameter Superposition to the policy nueral network to increase its capacity of learning multiple tasks.
- Demontrated through experiements that deep RL with parameter superposition increases its capacity by over 30% in average than baseline methods in overcoming catastrophic forgetting.
- Implemented various deep RL methods, including Policy-Gradient, DQN, model-based RL, Actor-Critic; trained and evaluated different methods in Metaworld benchmarks in experiments.

PROFESSIONAL SKILLS

- Proficient: Python(Anaconda, Machine Learning, Flask), Javascript(AngularJS), Java, C
- Familiar: C++(CUDA programming), Go, Ruby on Rails, HTML, CSS
- Tools & Technologies: MongoDB, MySql, PostgresSql, Firebase, Xcode, Jupyter Notebook