Shuang Liu

Contact Information

E-mail: liushuang931006@gmail.com

Education

University of California, San Diego, Sept. 2016 - June 2022
- Ph.D. in Computer Science
- Research Advisor: Hao Su

Shanghai Jiao Tong University, Sept. 2012 - June 2016
- B.S. in Computer Science (ACM Class)
- Research Advisors: Karthik Sridharan, Zhihua Zhang, Xiaomin Chen

Employment

Software Engineer, Aug. 2022 - Present
- Location: Google Research @ Google
- Team: OCR – Video OCR

Programming Skills

C, C++, Python

Research Experience

Research Intern, June 2021 - Sept. 2021
- Location: Google Research @ Google
- Project: Unified Multi-Level Page Layout Entity Clustering by Graph Convolutional Networks

Quantitative Research Intern, June 2020 - Aug. 2020
- Location: Global Quantitative Strategies @ Citadel
- Project: Futures volume prediction

Research Assistant, Sept. 2016 - Sept. 2018
- Location: University of California, San Diego
- Mentor: Kamalika Chaudhuri
- Topics: Machine Learning Theory, Generative Adversarial Learning, Large-Scale Optimal Transport, Adversarial Examples

Research Intern, Feb. 2016 - May 2016
- Location: Yitu Technology
- Topics: Face detection and Face alignment

Research Assistant, July 2015 - Dec. 2015
- Location: Cornell University
- Mentor: Karthik Sridharan
- Topics: Convex Analysis, Banach Space Geometry, Large-Scale Smooth Optimization, Online Learning, Bandit Convex Optimization, Partial Information Games

Research Assistant, June 2014 - June 2015
- Location: Shanghai Jiao Tong University
- Mentor: Zhihua Zhang
- Topics: Convex Optimization, Statistical Machine Learning, Stochastic Bandit Optimization, Distributed Bandit Optimization

Publications

Conferences
- Zhiwei Jia, Xuanlin Li, Zhan Ling, Shuang Liu, Yiran Wu, Hao Su
  Improving Policy Optimization with Generalist-Specialist Learning
  ICML 2022
- Shuang Liu, Renshen Wang, Michalis Raptis, Yasuhisa Fujii
  Unified Line and Paragraph Detection by Graph Convolutional Networks
  DAS 2022 (oral presentation)

- Shuang Liu, Olivier Bousquet, Kamalika Chaudhuri
  Approximation and Convergence Properties of Generative Adversarial Learning
  NeurIPS 2017 (spotlight presentation)
- Jiachen Li, Quan Vuong, Shuang Liu, Minghua Liu, Kamil Ciosek,
  Henrik Christensen, Hao Su
  Multi-task Batch Reinforcement Learning with Metric Learning
  NeurIPS 2020

Manuscripts

- Shuang Liu, Hao Su
  Provably Efficient Kernelized Q-Learning
- Shuang Liu, Hao Su
  Regret Bounds for Discounted MDPs
- Shuang Liu, Kamalika Chaudhuri
  The Inductive Bias of Restricted f-GANs
- Shuang Liu, Cheng Chen, Zhihua Zhang
  Regret vs. Communication: Distributed Stochastic Multi-Armed Bandits and Beyond

Teaching Experience

Teaching Assistant, Spring 2015

- Course: Advanced Compiler Design
- Location: Shanghai Jiao Tong University
- Instructor: Yong Yu

Teaching Assistant, Spring 2018

- Course: Introduction to AI: A Statistical Approach
- Location: University of California, San Diego
- Instructor: Kamalika Chaudhuri

Undergraduate Course Projects

C Compiler implemented in Java

- https://bitbucket.org/sadkangaroo/compiler2014

Nachos Operating System implemented in Java

- https://bitbucket.org/sadkangaroo/nachos2014

Unix-like Shell implemented in C

- https://github.com/sadkangaroo/shellproject

Simulated GPGPU implemented in C++

- https://bitbucket.org/sadkangaroo/my-gpgpu-sim

Database Back-End implemented in C

- https://bitbucket.org/sadkangaroo/shuangliudbspring15

Database Front-End implemented in MySQL and Java

- https://bitbucket.org/vegetable_h/database-project

Graduate Course Projects

Compiler Optimization through LLVM

- https://ucsd-pl.github.io/cse231/wi17/project.html

Functional Programming (Haskell)

- https://ucsd-cse230.github.io/sp20/

Awards **2018 Google PhD Fellowship**

(39 recipients from North America, Europe and the Middle East)

2015 Google Excellence Scholarship

(58 Recipients in China)

ACM International Collegiate Programming Contest, Asia Regional

- Gold Medal in Shanghai, China, 2011
- Gold Medal in Fuzhou, China, 2011
- Gold Medal in Tianjin, China, 2012
- 4th Place in Hat Yai, Thailand, 2012
- Gold Medal in Changsha, China, 2013
- Silver Medal in Changchun, China, 2013

National Olympiad in Informatics, China

- Bronze Medal (National), 2011
- Gold Medal (Province), 2007, 2008, 2009, 2010

Services **Conference Reviewer:** NeurIPS 2019, ICML 2019, ACML 2019, AISTATS 2019, NeurIPS 2020

Journal Reviewer: JMLR