

Shuang Liu

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EXPERIENCE

Senior Software Engineer

Google DeepMind

May 2024 – Present

Mountain View, CA

- Gemini pretraining; Gemini multimodal; Gemini document understanding.
- Built a full-fledged, research-ready agent harness from scratch, featuring a plugin system and built-in customizable sub-agent orchestration.

Software Engineer

Google Research

Aug. 2022 – May 2024

Mountain View, CA

- Led development of the mobile Google OCR engine, now shipping in Chrome and on Android; co-developed the server-side Google OCR engine serving internal and external traffic.

Research Intern

Google Research

Jun. 2021 – Sept. 2021

Mountain View, CA

- Unified multi-level page layout entity clustering with graph convolutional networks.

Quantitative Research Intern

Citadel — Global Quantitative Strategies

Jun. 2020 – Aug. 2020

Chicago, IL

- Futures volume prediction.

EDUCATION

Ph.D., Computer Science

University of California, San Diego

2016 – 2022

La Jolla, CA

- Advisor: Hao Su. Earlier: Kamalika Chaudhuri (2016–2018).
- Thesis: *Regret Analysis for Discounted Reinforcement Learning*.

B.S., Computer Science (ACM Class)

Shanghai Jiao Tong University

2012 – 2016

Shanghai, China

PUBLICATIONS

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

AWARDS

- ACM-ICPC Asia Regional: 5 gold medals, 1 silver medal, 2011–2013.
- National Olympiad in Informatics (China): national bronze 2011; provincial gold 2007–2010.
- Google Ph.D. Fellowship, 2018 (39 recipients across North America, Europe and the Middle East).
- Google Excellence Scholarship, 2015 (58 recipients in China).