Kyle Hsu

kylehsu.org kylehsu@cs.stanford.edu @kylehkhsu

education

Stanford University — Stanford, CA, USA
PhD Candidate in Computer Science — 2020-09 – 2025-05 (exp.)
advised by Chelsea Finn and Jiajun Wu

University of Toronto — Toronto, ON, Canada
BASc in Engineering Science — 2015-09 – 2018-05, 2019-09 – 2020-05
high honors, 3.98/4.00 CGPA

Sir Winston Churchill Secondary School — Vancouver, BC, Canada
International Baccalaureate Diploma Program — 2013-09 – 2015-06
43/45 points

professional experience

Toyota Research Institute — Los Altos, CA, USA
Research Intern w/ Blake Wulfe — 2024-06 – 2024-09
large behavior models

Google Brain (now Google DeepMind) — Mountain View, CA, USA
Research Intern w/ Shane Gu — 2020-06 – 2020-09
data generation for generalizable robotic manipulation

Vector Institute — Toronto, ON, Canada
Undergraduate Thesis Student w/ Roger Grosse — 2019-09 – 2020-05
differentiable annealed importance sampling

Undergraduate Researcher w/ Dan Roy — 2019-12 – 2020-02
PAC-Bayes bound optimization

Berkeley Artificial Intelligence Research — Berkeley, CA, USA
Visiting Student Researcher w/ Sergey Levine — 2018-06 – 2019-05
unsupervised meta-learning

Max Planck Institute for Software Systems — Kaiserslautern, RP, Germany
Research Intern w/ Rupak Majumdar — 2017-06 – 2017-09
scalable abstraction-based controller synthesis

Micro/NanoPhotonics Lab — Toronto, ON, Canada
Undergraduate Researcher w/ Joyce Poon — 2016-05 – 2016-11
waveguide-based external-cavity semiconductor lasers

Integrated Photonics Lab — Berkeley, CA, USA
Research Volunteer with Ming C. Wu — 2014-06 – 2014-08
wrap-around sililcon-germanium photodetectors

honors and awards

Postgraduate Scholarship – Doctoral (PGS D), NSERC — 2023
to fund Canadian doctoral students for 3 years

Canada Graduate Scholarship – Doctoral (CGS D), NSERC [declined] — 2023
for a highly scored PGS D application

Sequoia Capital Stanford Graduate Fellowship, Stanford University 2020
to fully fund doctoral students for 3 years

Finalist, Outstanding Undergraduate Researcher Award, CRA 2020
for undergraduate computer science research in North America

Engineering Science Award of Excellence, University of Toronto 2020
for academic achievement across all semesters

Wallberg Undergraduate Scholarship, University of Toronto 2016, 2017, 2019
for academic standing

Research in Science and Engineering Scholarship, DAAD 2017
to fund a summer research internship in Germany

Undergraduate Student Research Award, NSERC [declined] 2017
to fund a summer research internship in Canada

Engineering Science Research Opportunities Fellowship, University of Toronto 2016
to fund a summer research fellowship

Walter Scott Guest Memorial Scholarship, University of Toronto 2015
for academic standing

selected publications

for full list, please see `my Google Scholar profile`
**denotes equal contribution*

robot learning

Evaluating real-world robot manipulation policies in simulation 2024
Xuanlin Li*, Kyle Hsu*, Jiayuan Gu*, Karl Pertsch, Oier Mees, Homer Rich Walke, Chuyuan Fu, Ishikaa Lunawat, Isabel Sieh, Sean Kirmani, Sergey Levine, Jiajun Wu, Chelsea Finn, Hao Su, Quan Vuong, Ted Xiao
Conference on Robot Learning (CoRL)

Vision-based manipulators need to also see from their hands 2022
Kyle Hsu*, Moo Jin Kim*, Rafael Rafailov, Jiajun Wu, Chelsea Finn
International Conference on Learning Representations (ICLR) oral presentation

disentangled representation learning

Tripod: three complementary inductive biases for disentangled representation learning 2024
Kyle Hsu*, Jubayer Ibn Hamid*, Kaylee Burns, Chelsea Finn, Jiajun Wu
International Conference on Machine Learning (ICML)

Disentanglement via latent quantization 2023
Kyle Hsu, Will Dorrell, James CR Whittington, Jiajun Wu, Chelsea Finn
Neural Information Processing Systems (NeurIPS)

unsupervised meta-learning

Unsupervised curricula for visual meta-reinforcement learning 2019
Allan Jabri, Kyle Hsu, Ben Eysenbach, Abhishek Gupta, Sergey Levine, Chelsea Finn
Neural Information Processing Systems (NeurIPS) spotlight presentation

Unsupervised learning via meta-learning 2019
Kyle Hsu, Sergey Levine, Chelsea Finn
International Conference on Learning Representations (ICLR)

scalable abstraction-based controller synthesis

Lazy abstraction-based controller synthesis 2019
Kyle Hsu, Rupak Majumdar, Kaushik Mallik, Anne-Kathrin Schmuck
International Symposium on Automated Technology for Verification and Analysis (ATVA) invited paper

Multi-layered abstraction-based controller synthesis for continuous-time systems 2018
Kyle Hsu, Rupak Majumdar, Kaushik Mallik, Anne-Kathrin Schmuck
International Conference on Hybrid Systems: Computation and Control (HSCC)

misc. machine learning

Differentiable annealed importance sampling and the perils of gradient noise 2021
Guodong Zhang, Kyle Hsu, Jianing Li, Chelsea Finn, Roger Grosse
Neural Information Processing Systems (NeurIPS)

On the role of data in PAC-Bayes bounds 2021
Gintare Karolina Dziugaite, Kyle Hsu, Waseem Gharbieh, Gabriel Arpino, Daniel M Roy
International Conference on Artificial Intelligence and Statistics (AISTATS)

service

peer review

**denotes outstanding reviewer award*

International Conference on Learning Representations (ICLR)	2021*, 2022, 2023*
International Conference on Machine Learning (ICML)	2020, 2021, 2022
Neural Information Processing Systems (NeurIPS)	2019, 2020, 2021, 2022, 2023
International Conference on Artificial Intelligence and Statistics (AISTATS)	2021
Reinforcement Learning Conference (RLC)	2024

Stanford University Stanford, CA, USA

Student Reader, Computer Science PhD Admissions Committee	2021, 2023
Section Leader, Code in Place	2021
Mentor, Computer Science Mentoring Program	2020, 2021
Reviewer, Student-Applicant Support Program	2020

University of Toronto Toronto, ON, Canada

Mentor, NSight Mentorship Program	2017, 2018, 2019
Group “Leedur”, Engineering Orientation Week	2016, 2019
Director of Business Development, You’re Next Career Network	2017
Undergraduate Engineering Journal Editor, Galbraith Society	2016

teaching

Stanford University Stanford, CA, USA
Teaching Assistant, CS 330: Deep Multi-Task and Meta Learning 2021, 2022

mentorship

Isabel Sieh (Stanford BS)
Ishikaa Lunawat (Stanford MS)
Jubayer Ibn Hamid (Stanford BS)
Moo Jin Kim (Stanford MS, now Stanford PhD)

skills and interests

technical skills

code: Python, JAX, PyTorch, C++, git, LaTeX
dissemination: technical writing & figure-making, Keynote, basic web design & video editing

misc. skills

bilingual (Mandarin)

hobbies

ski & snowboard, Soulslike & board games, SCUBA