

Kyle Hsu

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EDUCATION

Stanford University Doctor of Philosophy Student in Computer Science	Palo Alto, CA, USA starting 2020-09
University of Toronto Bachelor of Applied Science in Engineering Science Robotics Engineering Option Graduation with High Honours	Toronto, ON, Canada 2015 – 2018, 2019 – 2020 CGPA: 3.98/4.00

RESEARCH EXPERIENCES

Brain Team, Google Research Intern with Dr. Shane Gu Topic(s): trajectory optimization and generalization in robotic manipulation	Mountain View, CA, USA (remotely) 2020-06 – 2020-09
Vector Institute & University of Toronto Undergraduate Researcher with Prof. Roger Grosse and Prof. Daniel Roy Topic(s): Bayesian neural networks, meta-learning, PAC-Bayes bound optimization	Toronto, ON, Canada 2019-06 – 2020-05
Berkeley AI Research, UC Berkeley Visiting Student Researcher with Prof. Sergey Levine and Prof. Chelsea Finn Topic(s): unsupervised meta-learning for few-shot image classification and reinforcement learning	Berkeley, CA, USA 2018-06 – 2019-05
Max Planck Institute for Software Systems Research Intern with Prof. Rupak Majumdar Topic(s): scalable abstraction-based controller synthesis algorithms	Kaiserslautern, RP, Germany 2017-06 – 2018-04
Micro/NanoPhotonics Lab, University of Toronto Undergraduate Researcher with Prof. Joyce Poon Topic(s): characterizing on-chip waveguide-based external-cavity semiconductor lasers	Toronto, ON, Canada 2016-05 – 2016-11
Integrated Photonics Lab, UC Berkeley Research Volunteer with Prof. Ming C. Wu Topic(s): characterizing wrap-around silicon-germanium photodetectors	Berkeley, CA, USA 2014-06 – 2014-08

HONORS AND AWARDS

Stanford Graduate Fellowship , Stanford University Awarded to outstanding students pursuing doctoral degrees in science and engineering	2020
Outstanding Undergraduate Researcher Award Finalist , Computing Research Association (CRA) Awarded to top undergraduate computer science researchers in North America	2020
Engineering Science Award of Excellence , University of Toronto Awarded to top engineering science students for academic achievement across all semesters	2020
Wallberg Undergraduate Scholarship , University of Toronto Awarded on the basis of academic standing	2016, 2017, 2019
Research in Science and Engineering Scholarship , German Academic Exchange Service (DAAD) Awarded to fund a summer research internship in Germany	2017

Undergraduate Student Research Award , NSERC [<i>declined</i>] Awarded to fund a summer research internship in Canada	2017
Engineering Science Research Opportunities Fellowship , University of Toronto Awarded to fund a summer research fellowship at the University of Toronto	2016
Walter Scott Guest Memorial Scholarship , University of Toronto Awarded on the basis of academic standing	2015

PUBLICATIONS

UNDER REVIEW

- [1] Gintare Karolina Dziugaite, Waseem Gharbieh, **Kyle Hsu**, and Daniel M. Roy, “On the role of data in PAC-Bayes bounds”, 2020.

PEER-REVIEWED CONFERENCE AND JOURNAL PAPERS

- [5] Allan Jabri, **Kyle Hsu**, Benjamin Eysenbach, Abhishek Gupta, Sergey Levine, and Chelsea Finn, “Unsupervised curricula for visual meta-reinforcement learning”, in *Neural Information Processing Systems (NeurIPS)*, **spotlight presentation**, 2019.
- [4] **Kyle Hsu**, Sergey Levine, and Chelsea Finn, “Unsupervised learning via meta-learning”, in *International Conference on Learning Representations (ICLR)*, 2019.
- [3] †**Kyle Hsu**, Rupak Majumdar, Kaushik Mallik, and Anne-Kathrin Schmuck, “Lazy abstraction-based control for safety specifications”, in *Conference on Decision and Control (CDC)*, 2018.
- [2] †**Kyle Hsu**, Rupak Majumdar, Kaushik Mallik, and Anne-Kathrin Schmuck, “Multi-layered abstraction-based controller synthesis for continuous-time systems”, in *International Conference on Hybrid Systems: Computation and Control (HSCC)*, 2018.
- [1] Ryan Going, Tae Joon Seok, Jodi Loo, **Kyle Hsu**, and Ming C. Wu, “Germanium wrap-around photodetectors on silicon photonics”, *Optics Express*, 2015.

INVITED PAPERS

- [1] †**Kyle Hsu**, Rupak Majumdar, Kaushik Mallik, and Anne-Kathrin Schmuck, “Lazy abstraction-based controller synthesis”, in *International Symposium on Automated Technology for Verification and Analysis (ATVA)*, 2019.

†alphabetical author ordering

INVITED TALKS, PRESENTATIONS, AND PANELS

TALKS

- [2] *Adaptive controller synthesis using multiscale abstractions*, Max Planck Institute for Software Systems, Kaiserslautern, Germany, 2017.
- [1] *Characterizing a waveguide-based external-cavity semiconductor laser*, Undergraduate Engineering Research Day, Toronto, Canada, 2016.

POSTER PRESENTATIONS

- [3] *Unsupervised curricula for visual meta-reinforcement learning*, Neural Information Processing Systems (NeurIPS), Vancouver, Canada, 2019.
- [2] *Unsupervised learning via meta-learning*, International Conference on Learning Representations (ICLR), New Orleans, USA, 2019.
- [1] *Unsupervised learning via meta-learning*, NeurIPS Workshop on Meta-Learning, Montréal, Canada, 2018.

PANELS

- [1] *AI student researcher panel*, AI Squared Forum, Toronto, Canada, 2019.

PROFESSIONAL ACTIVITIES

CONFERENCE PAPER REVIEWING

International Conference on Learning Representations (ICLR)	2020
International Conference on Machine Learning (ICML)	2020
Neural Information Processing Systems (NeurIPS)	2019, 2020

WORKSHOP PAPER REVIEWING

ICLR Workshop on Beyond “Tabula Rasa” in Reinforcement Learning (BeTR-RL)	2020
NeurIPS Workshop on Meta-Learning	2019

COMMUNITY SERVICE AND LEADERSHIP

NSight Mentorship Program, University of Toronto Mentor	Toronto, ON, Canada 2017-09 – 2020-04
Engineering Orientation Week, University of Toronto Group Leader (“Leedur”)	Toronto, ON, Canada 2016, 2019
You’re Next Career Network, University of Toronto Director of Business Development	Toronto, ON, Canada 2017-03 – 2018-04
Galbraith Society, University of Toronto Undergraduate Engineering Journal Editor	Toronto, ON, Canada 2016-10 – 2017-07

TECHNICAL SKILLS

Languages: Python, MATLAB, C++

Libraries and Tools: Unix, PyTorch, TensorFlow, JAX, Docker, Matplotlib, git, bash, L^AT_EX