Yuqing Du

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Education

2019–2025 (Expected) **PhD in Computer Science**, *University of California, Berkeley*, Berkeley CA, Cumulative GPA: 4.0.
Advised by Prof. Pieter Abbeel.

2014–2019 **B.A.Sc. in Engineering Physics, Minor in Honours Mathematics**, *University of British Columbia*, Vancouver BC, Cumulative GPA: 94%, 4.33 GPA.
Governor-General's Silver Medal (top of undergraduate class at UBC)

Research Interests

My interests broadly involve **human-robot interaction (HRI)**, **social robotics**, and **real robot learning**. I am seeking to facilitate fluent, socially-normative interactions between humans and artificial agents by developing adaptable intelligent systems that can integrate safely and effectively into human environments.

Publications

* denotes equal contribution.

Refereed Conferences/Workshops

- **Y. Du,** S. Tiomkin, E. Kiciman, D. Polani, P. Abbeel, and A. Dragan, "AvE: Assistance via Empowerment", *Neural Information Processing Systems (NeurIPS) 2020*, Dec 2020.
- **Y. Du,** N. J. Hetherington, C. L. Oon, W. P. Chan, C. P. Quintero, E. A. Croft, and H. F. M. Van der Loos, "Group Surfing: A Pedestrian-Based Approach to Sidewalk Robot Navigation", *IEEE International Conference on Robotics and Automation (ICRA 2019)* , Montreal, Canada, May 2019.
- **Y. Du,** N. J. Hetherington, C. L. Oon, W. P. Chan, C. P. Quintero, E. A. Croft, and H. F. M. Van der Loos, "Sidewalk Delivery Robot Navigation: A Pedestrian-Based Approach", *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2018): Workshop on Human-Aiding Robotics.*, Madrid, Spain, October 2018.

Preprints

- E. Vinitsky*, **Y. Du***, K, Parvate*, K. Jang, P. Abbeel, and A. Bayen., "Robust Reinforcement Learning using Adversarial Populations", *arXiv: 2008.01825*, Aug 2020.

Work Experience

2016 – 2018 **UBC Collaborative Advanced Robotics and Intelligent Systems (CARIS) Lab**, *Research Assistant*, Vancouver, BC.

- NSERC USRA funded research intern. Researched and developed a novel 'group surfing' autonomous navigation algorithm for socially-aware sidewalk-traversing mobile robots.
- Modelled predictive handovers for effective human-robot interaction.
- Investigated augmented reality (AR) use for programming and controlling industrial robotics as an alternative to traditional methods of teaching by demonstration or through controllers.

Sep.–Dec. 2017 **Tesla, Inc.**, *Body Controls Hardware - Electrical Engineering Intern*, Palo Alto, CA.
- Implemented an autonomous failure mode test rig used to stress test vehicle controllers.
- Diagnosed Model 3 vehicle controllers; from bench-level testing to vehicle-level analysis.

May–Sep. 2017 **Google LLC**, *Platforms - Hardware Engineering Intern*, Sunnyvale, CA.
- Applied big data analytics (via Google's Dremel) to investigate and diagnose large-scale HDD issues across datacenters.
- Improved the staggered spin-up implementation for HDDs in Google's datacenters through power consumption analyses.

Jan.–Apr. 2016 **Copperleaf Technologies**, *Software Engineering Intern*, Vancouver, BC.
- Implemented improved custom tools for Copperleaf's C55 asset optimization software by increasing responsiveness, improving usability and adding new functionalities.

Teaching Experience

May–Aug. 2018 **UBC ENPH 253**, *Teaching Assistant*, Vancouver, BC.
- Responsible for providing design reviews and implementation assistance for a complex robotics prototyping course; focus on mechanical, electrical, and firmware design.

Sep.–Dec. 2016 **UBC CPEN 221**, *Teaching Assistant*, Vancouver, BC.
- Responsible for assessing and providing Java code feedback to over 200 students. Focus on abstract data types, object-oriented design, type hierarchies, and concurrent software design.

Honours and Awards

2019 **Governor-General's Silver Medal**, *Awarded to top student in undergraduate class.*

2015–2018 **Trek Excellence Scholarship for Continuing Students**, *Awarded to top 5% of undergraduate domestic students at UBC Vancouver.*

2018 **Gordon Merritt Shrum Memorial Scholarship**, *Award made on recommendation of the Department of Physics to a student entering the final year of study.*

2018 **National Sciences and Engineering Research Council of Canada USRA**, *Selected by UBC on the basis of academic achievement and research aptitude.*

2018 **John Collison Memorial Scholarship in Mathematics**, *Award made on the recommendation of the Department of Mathematics.*

2017 **Donald J. Evans Scholarship in Engineering**, *Award made on the recommendation of the Faculty of Applied Science; selected from all undergraduate students in engineering.*

2016 **Captain C. Y. Wu Scholarship**, *Award made on the recommendation of the Department of Engineering Physics.*

2015 **EXPO 86 Scholarship**, *Award made on the recommendation of the Dean of the Faculty of Applied Science; selected from all beginning or continuing students in engineering.*

2014 **British Columbia Government Scholarship**, *Awarded to top graduates in BC.*