

Aaron Hao Tan

☎ (905) 410-6802 | ✉ aaronhao.tan@utoronto.ca | 🏠 aarontan-git.github.io | 💻 aaron-hao-tan | 🎓 A. H. Tan

Academic Experience

| | |
|---|---|
| Stanford University Postdoctoral Fellow, Stanford University Lab Assistive Robotics and Manipulation Lab | <i>Palo Alto, USA</i> <i>Incoming 2025</i> |
| University of Toronto Doctor of Philosophy, Robotics Institute Thesis Development of Inference-driven Decision Making for Mobile Robots, CGPA (4.0/4.0) | <i>Toronto, Canada</i> <i>2019 - 2024</i> |

Work Experience

| | |
|--|---|
| Robot Learning Researcher, Ph.D. Thesis Autonomous System and Biomechatronics Lab, University of Toronto | <i>Toronto, Ontario</i> <i>2019 - 2024</i> |
| <ul style="list-style-type: none">• Vision Language Models Robot reasoning/planning for cross embodiment navigation with hand-drawn maps.• Diffusion Models Multi-robot map prediction via contrastive learning and consistency models in 3D environments.• Decision Transformers End-to-end, goal oriented multi-robot navigation in unknown, unstructured environments.• Deep Multi-agent Reinforcement Learning Centralized training for decentralized execution to address multi-robot task inference.• Sim 2 Real Transferred robot navigation policy from simulation to the real world using domain randomization.• Publications Published in ICRA/IROS (oral presentation), RAL, JIRS, and ASME conferences. | |
| Technical Founder Syncere AI, Scholarply, ONE800 | <i>Toronto, Ontario</i> <i>Jan. 2023 - Present</i> |
| <ul style="list-style-type: none">• Syncere, Robots for Modern Hospitality Building robots for the hotel industry.• Scholarply, LLM-based Financial Agent Building LLM agents to automate the scholarship application process for students.• ONE800, ChatGPT for Seniors Integrated generative AI technologies to iMessage to improve AI accessibility for senior population.• Leadership Managed cross-functional teams from engineering to marketing and business operations. | |
| AI Researcher Temetry Faculty of Medicine, Toronto | <i>Toronto, Ontario</i> <i>May. 2022 - Aug. 2022</i> |
| <ul style="list-style-type: none">• Language Models Built LLM-powered patient screening tool and deploying through SMS to increase healthcare accessibility.• Deep Learning First application of deep learning to the classification of homonymous defects on automated perimetry.• Accessibility Quantitative analysis on the impacts of remote education for surgeons globally.• Publications Published in British Journal of Ophthalmology. | |
| Robotics Researcher, MASc Thesis General Robotics & Autonomous Systems and Processes Lab, Ontario Tech University | <i>Oshawa, Ontario</i> <i>May. 2017 - May. 2019</i> |
| <ul style="list-style-type: none">• Mobile Robot Stack Designed and developed both hardware and software for a novel multi-terrain robot.• Mechatronics Designed and implemented hardware architecture for robot sensing, data acquisition, and motion control.• Publications Published 4 papers for IEEE and ASME conferences and journals. | |
| Engineering Specialist/Advanced Technology Specialist Intern General Motors of Canada Company - Active Safety Advanced Development | <i>Oshawa, Ontario</i> <i>2 Terms (2016/2017)</i> |
| <ul style="list-style-type: none">• Wearable Technology Designed wearable hardware and developed ML models to predict driver behavior based on vital signs.• Camera System Designed an adjustable camera system for trailers to provide drivers with greater awareness. | |

Recognition

| | | |
|-----------|--|-------------------------|
| 2022-2024 | Ontario Graduate Scholarship (\$15k Prize) , University of Toronto | <i>Toronto, Ontario</i> |
| 2023 | Annual Shot on iPhone Photography Award (3rd Place) , IPPAWARDS | <i>NYC, New York</i> |
| 2022 | Apple AI/ML Scholar Nominee (1 of 3 selected across university) , University of Toronto | <i>Toronto, Ontario</i> |
| 2022 | Undergraduate Teaching Assistant Award (\$500 Prize) , University of Toronto | <i>Toronto, Ontario</i> |
| 2022 | DiDi Graduate Scholarship (\$10k Prize) , University of Toronto | <i>Toronto, Ontario</i> |
| 2021 | 1st Place at RO-MAN: The Roboethics Competition (\$1k Prize) , McGill University | <i>Montreal, Quebec</i> |
| 2021 | Best Research Day Paper in Dept. of Ophthalmology and Vision Sciences , University of Toronto | <i>Toronto, Ontario</i> |
| 2019 | Outstanding Thesis Award & Dean's Graduate Scholarship (\$5k Prize) , Ontario Tech University | <i>Oshawa, Ontario</i> |
| 2018 | Photograhpy for Apple's Shot on iPhone Campaign , Apple | <i>California, USA</i> |