

TAO ZHONG

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EDUCATION

Princeton University 08/2023 - Present
Degree: Ph.D. in Mechanical and Aerospace Engineering *cGPA:* 4.0/4.0
Advisor: Christine Allen-Blanchette

University of Toronto 09/2018 - 06/2023
Degree: B.A.Sc. in Engineering Science (with High Honour) *cGPA:* 3.81/4.0
Major: Robotics Engineering *Minor:* Artificial Intelligence

EXPERIENCE

CAB Lab, Princeton University 09/2023 - Present
Graduate Research Student, Advisor: Prof. Christine Allen-Blanchette
Topics: leveraging symmetries and integrating physics knowledge for dexterous manipulation, object-centric dynamics-aware representation learning

People, AI, & Robots Lab, Vector Institute & University of Toronto 03/2022 - 08/2023
Undergraduate Research Student, Advisor: Prof. Animesh Garg
Topics: differentiable grasp synthesis for dexterous hands [[Paper](#), [Project Page](#)], vision-based grasp generation with deep generative model

Noah's Ark Lab, Huawei Research Canada 05/2021 - 05/2022
Machine Learning Research Intern, Advisor: Prof. Yang Wang
Topics: out-of-distribution prompt generation for foundation models [[Paper](#), [Project Page](#)], domain adaptive knowledge distillation from Mixture-of-Experts [[Paper](#), [Code](#)], cold-start recommendation with meta-learning

aUToronto, The University of Toronto Self-Driving Car Team 08/2020 - 08/2022
Mapping & Localization Team Lead, Team Advisors: Prof. Tim Barfoot, Prof. Steven Waslander, Prof. Angela Schoellig, Prof. Jonathan Kelly
Topics: semantic map generation and optimization, SLAM algorithm development

Shenzhen Institute of Artificial Intelligence and Robotics for Society, CUHK(SZ) 05/2020 - 09/2020
Visiting Research Student, Advisor: Prof. Huihuan Qian
Topics: web-based sailboat testing platform, state estimation and control for sailboats

PUBLICATIONS

- Zhixiang Chi, Li Gu, **Tao Zhong**, Huan Liu, Yuanhao Yu, Konstantinos N Plataniotis, Yang Wang. Adapting to Distribution Shift by Visual Domain Prompt Generation. In *International Conference on Learning Representations (ICLR)*, 2024.
- Dylan Turpin, **Tao Zhong**, Shutong Zhang, Guanglei Zhu, Eric Heiden, Miles Macklin, Stavros Tsogkas, Sven Dickinson, Animesh Garg. DexGrasp-1M: Dexterous Multi-finger Grasp Generation Through Differentiable Simulation. In *IEEE International Conference on Robotics and Automation (ICRA)*, 2023.
- Tao Zhong***, Zhixiang Chi*, Li Gu*, Yang Wang, Yuanhao Yu, Jin Tang. Meta-DMoE: Adapting to Domain Shift by Meta-Distillation from Mixture-of-Experts. In *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

AWARDS & HONORS

Princeton University First Year Fellowship in Natural Sciences and Engineering 2023
NeurIPS 2022 Scholar Award 2022
SAE Autodrive Challenge: 1st Place Winner (As a team) 2020, 2021, 2022
University of Toronto Dean's Honours List (All 8 terms) 2018 - 2023

SKILLS

Programming Languages: Python, C/C++, MATLAB/Simulink, SQL, Verilog, ARM Assembly
Libraries & Tools: PyTorch, NumPy, OpenCV, scikit-learn, ROS, Git, \LaTeX