Siddarth Narasimhan

Robotics Institute, Mechanical Engineering
University of Toronto, Canada
https://quest2gm.github.io/
Last Updated: December 2024

PUBLICATIONS

Forthcoming Contributions

2024 **S. Narasimhan**, A. H. Tan, D. Choi, G. Nejat, "OLiVia-Nav: An Online Lifelong Vision Language Approach for Mobile Robot Social Navigation", **IEEE International Conference on Robotics and Automation** (Under Review), Workshop @ **CoRL 2024** (**Spotlight Presentation**)

2024 A. H. Tan, **S. Narasimhan**, G. Nejat, "4CNet: A Diffusion Approach to Map Prediction for Decentralized Multi-Robot Exploration", **IEEE Transaction on Robotics** (Under Review)

Non-Refereed Contributions

2023 **S. Narasimhan**, "Using Contrastive Learning for Map Prediction in 3D Environments via Trajectory Map Pretraining", BASc Thesis University of Toronto Engineering Science, Link

2020 **S. Narasimhan**, W. Huang, N. Zheng, "Intelligent Time-Stamp Detection and Recognition Using an Adaptive Sliding Window Approach", Ministry of Transportation

EDUCATION

2023-2025
(Expected August 2025)
Master of Applied Science (MASc), University of Toronto, Canada
Autonomous Systems and Biomechatronics Lab
GPA (4.0/4.0)
Advisor: Goldie Nejat
Societies: Society for the Pursuit of AGI

2018-2023
Bachelor of Applied Science (BASc), Engineering Science, Honours
Major: Robotics Engineering, Minor: Artificial Intelligence
Major GPA (3.6/4.0)
Thesis: Map Inference and Exploration using Contrastive Learning

PROFESSIONAL EXPERIENCE

Syncere
Lead Hardware and Software Engineer
Sept 2024 - Present

- A startup I am building with my lab mates in an effort to bring robots into every household
- Recently gained **significant traction** with interests from large investors including Y Combinator and Spacecadet
- Currently leading the hardware and software design of our 6DoF robot manipulator for pick-and place and sanitation tasks
- Implemented diffusion and large vision language model policies for generalized autonomous navigation and manipulation

Advanced Micro Devices (AMD)
Power Design / Firmware Engineer
May 2021 – April 2022

- Received **Spotlight Award** for excellent contributions and performance as a co-op student.
- Designed a robust Remote Management platform to automate sending and decoding of thousands of I2C messages from GPUs
- Documented performance of 100 ASICs using metrics such as power efficiency, over current protection, dynamic response and power up.

Ontario Ministry of Transportation
Data Science Intern
June 2020 – August 2020

- Developed an intelligent provincial transportation system for highway analytics by leveraging GPS data and machine learning.
- Designed a novel timestamp detection and recognition algorithm to locate and convert timestamps found in highway video feed to text.

Ontario Ministry of Government and Consumer Services
Data Analyst
June 2018 – August 2019

- Built macro-powered databases to analyze thousands of spend transactions by Ontario ministries and standardize annual reporting.

SCHOLARSHIPS

2024	NSERC HeRo Create Fellowship ($10k)
2020	Mario and Dorothy Pesando Scholarship ($4k)
2018	Hira and Kamal Ahuja Award in Engineering ($1.5k)
2018	Loblaw Scholarship ($1.5k)
2018	UofT Engineering Entrance Scholarship ($2k)
2018	Municipal Engineers Association Bursary ($1.5k)

TEACHINGS

2025	MIE443: Mechatronics Systems: Design & Integration, Lab TA, UofT
2024	MIE443: Mechatronics Systems: Design & Integration, Lab TA, UofT