

# CHRIS AGIA

(416) 836-5422 • christopher.agia@mail.utoronto.ca • 259 Baker Hill Boulevard, Stouffville, ON L4A4P8

<https://agiachris.github.io/>

## EDUCATION

### BASc. in Engineering Science - Robotics, Artificial Intelligence

(exp.) May 2021

University of Toronto - Adviser: [Florian Shkurti](#)

*Relevant Coursework: Robotics, Deep Learning, Graph Representation Learning, Probabilistic Learning & Reasoning, Control Systems, Robot Vision, Algorithms & Data Structures, Linear Algebra, Calculus*

## EXPERIENCE

### Vector Institute & University of Toronto

Toronto, ON

Researcher at the Robot Vision and Learning Lab advised by [Florian Shkurti](#)

May20 - Present

*Topics: learning to plan (task & motion), graph neural networks, reinforcement learning, attention representations*

### Google, Cloud

San Francisco, CA

Software Engineering Intern building ABI simulators with the Istio Networking Team

May20 - Aug20

### Mila & McGill University

Montreal, QC

Research Intern at the Mobile Robotics Lab co-supervised by [Gregory Dudek](#) and [David Meger](#)

Jan20 - May20

*Topics: unsupervised learning of depth and motion, visual SLAM (direct methods), reinforcement learning*

### Noah's Ark Lab, Huawei Canada

Markham, ON

Deep Learning Research Intern on the Perception and Localization Team with [Bingbing Liu](#)

May19 - May20

*Topics: 3D scene understanding, semantic SLAM, road estimation, multi-view / multi-modal fusion*

### aUToronto - UofT AutoDrive Group

Toronto, ON

Autonomy Engineer developing deep learning pipelines with the Object Detection Team

Aug19 - May20

### University of Toronto Robotics Institute

Toronto, ON

Research Intern at the Autonomous Systems and Biomech. Lab supervised by [Goldie Nejat](#)

May18 - Aug18

*Topics: reinforcement learning, transfer learning (sim2real), autonomous robot navigation*

## SELECTED PUBLICATIONS

- [1] **C. Agia**, R. Cheng, D. Meger, F. Shkurti, G. Dudek, "Attention-based Representations in Deep Reinforcement Learning for Autonomous Driving," Paper under review, 2021
- [2] **C. Agia**, R. Cheng, Y. Ren, B. Liu, "S3CNet: A Sparse Semantic Scene Completion Network for LiDAR Point Clouds," Conference on Robot Learning (CoRL), Massachusetts, BOS, US, 2020
- [3] Y. Ren, R. Cheng, **C. Agia**, B. Liu, "Lightweight Semantic-aided Localization with Spinning LiDAR Sensor," Manuscript under review at IEEE Transactions on Intelligent Vehicles (T-IV), 2020
- [4] R. Cheng, **C. Agia**, D. Meger, G. Dudek, "Depth Prediction for Monocular Direct Visual Odometry," IEEE 17th Conference on Computer and Robot Vision (CRV), Ottawa, ON, Canada, 2020

## HONOURS / AWARDS

Dean's Honour List, 2018-2020

1st Place Programming, Ontario Engineering Competition (\$2500), 2019

1st Place Programming, University of Toronto Engineering Competition, 2019

NSERC Undergraduate Student Research Award (\$6000), 2018

3rd/50 Place, Engineering Science Robotics Competition, 2018

President's Scholarship Program (\$6000), 2016

## SKILLS

**Languages** (*Proficient*) Python, Rust, C/C++, MATLAB, LaTeX - (*Working*) Java, Assembly, Bash

**Software Tools** Git, Linux/Unix, Docker, Wasmtime (WebAssembly), Kubernetes

**Libraries** PyTorch, TensorFlow, ROS, NumPy, PCL, OpenCV, SciPy, scikit-learn, Pandas, Jupyter