CHRIS AGIA

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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