

RODRIGUE DE SCHAETZEN

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EDUCATION

Université de Montréal / Mila - Quebec AI Institute

Montreal, QC

PhD in Computer Science; Advisor: Prof. Liam Paull

Sept 2024 - Present

Research: Autonomous Driving, Trajectory Planning, Foundation Model Reasoning

Waterloo, ON

University of Waterloo

MASc in Electrical and Computer Engineering; Advisor: Prof. Stephen L. Smith

May 2021 - Aug 2024

Thesis: Local Navigation for Autonomous Maneuvering of Marine Vessels in Broken Ice Fields

University of British Columbia

Vancouver, BC

BSc (Honours) in Computer Science and Physics; Advisor: Prof. Alison Lister

Sept 2015 - May 2021

Thesis: Classifying Displaced Hadronic Jets in the ATLAS Calorimeter using CNNs

PUBLICATIONS

Poutine: Vision-Language-Trajectory Pre-Training and Reinforcement Learning Post-Training Enable Robust End-to-End Autonomous Driving

L Rowe*, **R de Schaetzen***, R Grgis, C Pal, L Paull

WAD@CVPR 2025 Workshop. 1st Place on the 2025 Waymo E2E Driving Challenge

AUTO-IceNav: A Local Navigation Strategy for Autonomous Surface Ships in Broken Ice Fields

R de Schaetzen, A Botros, N Zhong, K Murrant, R Gash, SL Smith

IEEE Transactions on Robotics (T-RO), 2025

Real-Time Navigation for Autonomous Surface Vehicles In Ice-Covered Waters

R de Schaetzen, A Botros, R Gash, K Murrant, SL Smith

IEEE International Conference on Robotics and Automation (ICRA), London, UK, May 2023.

Efficient Ground Vehicle Path Following in Game AI

R de Schaetzen, A Sestini

IEEE Conference on Games (CoG), Boston, MA, August 2023.

A Fully Automated Method for Bladder Segmentation in PSMA PET/CT Scans

Y Farag*, **R de Schaetzen***, G Chausse, F Yousefirizi, I Klyuzhin, A Rahmim, C Uribe

European Association of Nuclear Medicine (EANM), Oct 2021.

EXPERIENCE

Electronic Arts

Software Engineer Intern

Waterloo, ON

Sept 2022 - April 2023

- Designed and implemented a real-time path-following algorithm in C++ for ground vehicle control in Battlefield 2042, reducing vehicle-stuck failures by 70%; results published as a short paper (CoG 2023).

BC Cancer Research Centre

Part-time Researcher

Vancouver, BC

Jan 2021 - Aug 2021

- Developed a prostate lesion segmentation model on full-body PSMA PET/CT scans using deep convolutional neural networks; work presented at a nuclear medicine conference (EANM 2021).

University of British Columbia

Undergraduate Researcher

Vancouver, BC

May 2020 - Aug 2020

- Worked under Prof. Ian Mitchell as a funded summer undergraduate research student; built a training pipeline to learn a nonlinear dynamics model of a mobile robot and configured an overhead vision system to collect real-vehicle state data.

Zurich University of Applied Sciences

Research Intern

Zurich, Switzerland

May 2018 - July 2019

- Extended a cloud robotics web application by integrating cloud-based SLAM to offload computation, and implemented a robust ROS-based navigation system for a warehouse automation robot.

PROJECTS

Wildfire Smoke Detection Model

Sept 2020 - Dec 2020

- Led the UBC team in the 2020 ProjectX international ML competition on climate change (hosted by UofT AI); proposed an image classifier for forest fire smoke detection and created the first smoke-annotated video dataset with 139 hours of footage from 678 videos.

SELECTED COURSES

- Autonomous Vehicles, UdeM, Fall 2024 (Grade: A+)
- Probabilistic Graphical Models, UdeM, Fall 2024 (Grade: A+)
- Introduction to Optimization, Waterloo, Spring 2023 (Grade: A+)
- Robot Dynamics & Control, Waterloo, Spring 2022 (Grade: A+)
- Model Predictive Control, Waterloo, Winter 2022 (Grade: A+)
- Machine Learning and Data Mining, UBC, Winter 2020 (Grade: A+)

SKILLS

- Programming Languages:** Python, C++, C, MATLAB, Bash
- Libraries and Tools:** PyTorch, Unreal Engine, OpenCV, ROS, CasADi, AWS, Git

HONOURS AND AWARDS

- FRQNT Doctoral Scholarship (\$100,000, 2025 – 2028) *Université de Montréal*
- ICRA Travel Award (\$1700, 2023) *University of Waterloo*
- Science Undergraduate Research Experience Award (\$3500, 2020) *University of British Columbia*
- Dean's Honour List (2020) *University of British Columbia*
- Go Global Self-Initiated Research Abroad Award (\$2000, 2018) *University of British Columbia*
- Dr. Hal Weinberg Scholarship (\$1000, 2015) *University of British Columbia*

PROFESSIONAL SERVICE & VOLUNTEERING

- PhD Student Council Representative** for *UdeM Computer Science Student Association* (2024 – Present)
- Teaching Assistant** in *Numerical Methods, Software Construction, and Algorithms and Data Structures*
- Reviewer** for *American Control Conference* 2024 and *IEEE Transactions on Robotics* 2025
- Student Volunteer** for the *International Association for the Exchange of Students for Technical Experience* (IAESTE) Zurich Local Committee (2018 – 2019)
- Vice President** of the *UBC Bike Club* (2019 – 2021)