VOLODYMYR TKACHUK

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EDUCATION

Now **PhD in Computing Science** (advisors: Csaba Szepesvári & Xiaoqi Tan) **– University of Alberta**

2023 **MSc in Computing Science** (advisor: Csaba Szepesvári) **– University of Alberta**

2021 **BSc in Electrical Engineering – University of Waterloo**

- **91.9% GPA** in final two years, and academically **ranked 2nd** in class of 34 students for two terms

PUBLICATIONS

[1] **Trajectory Data Suffices for Statistically Efficient Learning in Offline RL with qpi-Realizability and Concentrability**
Volodymyr Tkachuk, Gellért Weisz, Csaba Szepesvári (NeurIPS 2024) [Submitted]

[2] **Regret Minimization via Saddle Point Optimization**
Johannes Kirschner, Alireza Bakhtiari, Kushagra Chandak, **Volodymyr Tkachuk**, Csaba Szepesvári (NeurIPS 2023)

[3] **On Efficient Planning in Large Action Spaces with Applications to Cooperative Multi-Agent Reinforcement Learning**
Volodymyr Tkachuk (MSc Thesis)

[4] **Efficient Planning in Combinatorial Action Spaces with Applications to Cooperative Multi-Agent Reinforcement Learning**
Volodymyr Tkachuk, Seyed Alireza Bakhtiari, Johannes Kirschner, Matej Jusup, Ilija Bogunovic, Csaba Szepesvári (AISTATS 2023)

[5] **Investigating action encodings in recurrent neural networks in reinforcement learning**
Matthew Kyle Schlegel, **Volodymyr Tkachuk**, Adam M. White, Martha White (TMLR 2023)

PUBLIC TALKS

2024 **Trajectory Data Suffices for Statistically Efficient Learning in Offline RL with qpi-Realizability and Concentrability** (Amii AI Seminar 2024) | Video

AWARDS AND SCHOLARSHIPS

2023 Graduate Teaching Award

2023 NSERC - Canada Graduate Scholarship – Master's (**$17,500)**

2021 Walter H Johns Graduate Fellowship **($5800)**

2020 Gerry Heckman Scholarship **($3000)**

2019 Dan and Anik Colquhoun Award **($2000)**

2016 University of Waterloo President's Scholarship **($2000)**

RESEARCH EXPERIENCE

2021 **Research Assistant**
University of Alberta – Advised by Martha White

2020 **Research Assistant**
University of Alberta – Advised by Matthew E. Taylor

2019 **Research Engineering Intern**
Apple – Acoustics Special Projects Group

PROFESSIONAL EXPERIENCE

2019 **Audio System Tuning Intern**
Apple – Telephony Tuning Team

2018 **Advanced CMOS Sensor Development Intern**
Teledyne DALSA – CMOS Sensor Products Team

2017 **Digital Tool Developer and Verification Engineering Intern**
Peraso Technologies – Digital Verification Team

2016 **Web Developer**
University of Waterloo – Undergraduate Recruitment Group

2016 **Software Engineering Intern**
T. Hong & Co. – Web Development Team

TEACHING EXPERIENCE

2024 **Instructor** (Fall term)
University of Alberta – CMPUT 267 (Machine Learning I) [website]

2024 **Graduate Teaching Assistant** (Winter term)
University of Alberta – CMPUT 267 (Basics of Machine Learning) [website]

2023 **Graduate Teaching Assistant**
University of Alberta – CMPUT 605 (Theoretical Foundations of Reinforcement Learning) [website]

2022 **Graduate Teaching Assistant**
University of Alberta – CMPUT 653 (Theoretical Foundations of Reinforcement Learning) [website]

2021 **Graduate Teaching Assistant**
University of Alberta – CMPUT 396 (Intermediate Machine Learning) [website]

RELATED COURSES

2019 **Machine Learning Foundations and Regression – Apple University**

2019 **Deep Learning Specialization – Coursera (deeplearning.ai)**

SKILLS

Languages and Tools
Python, C/C++, MATLAB, Vim, Git, Subversion

Software and Frameworks
OpenAI Gym, PyTorch, Cadence, Synopsys VCS