DYLAN ASHLEY

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EDUCATION

Ph.D. in Informatics Expected 2025
Università della Svizzera italiana (Dalle Molle Institute for Artificial Intelligence Research)
Supervisor: Jürgen Schmidhuber
Focus: Reinforcement Learning, Neural Networks, Machine Learning

M.Sc. in Computing Science 2020
University of Alberta (Alberta Machine Intelligence Institute)
Supervisor: Richard S. Sutton
GPA: 4.0 / 4.0

B.Sc. Honors in Computing Science 2017
University of Alberta

WORK EXPERIENCE

Research Consultant 2022 – Present
King Abdullah University of Science and Technology

- Assisting Prof. Jürgen Schmidhuber and Prof. Eric Feron with their research and the establishment of a new robotics laboratory within the KAUST AI Initiative.

Chief Technology Officer 2022 – Present
Perseverance Analytics Ltd.

- Non-profit startup which focuses on connecting communities to social supports to bridge the gap between the availability of services and accessibility of services.

Doctoral Research Assistant 2021 – Present
Università della Svizzera italiana

- Working with Prof. Jürgen Schmidhuber on using neural network-powered supervised learning methods to solve online reinforcement learning problems.

Director of Information Technology and Product Development 2021 – 2022
Perseverance Analytics Ltd.

- Founding member of an incorporated non-profit startup based in Alberta, Canada.

Vice-President Academic 2019 – 2020
Graduate Students' Association, University of Alberta

- Official representative of over 7,900 graduate students in academic matters.
- Advocated for graduate student issues to the university and worked with the university to build a better learning environment for students.
- Delivered several significant advocacy victories, including better oversight for mentorship and a reduced increment in tuition during a budgetary crisis.
- Time commitment of approximately 30 hours a week for a one-year term.

Graduate Research Assistant 2017 – 2020
University of Alberta

- Worked with Prof. Richard S. Sutton and others on several reinforcement learning topics.

Undergraduate Summer Research Assistant 2015 – 2017
University of Alberta

- Won three separate competitive four-month NSERC Undergraduate Student Research Awards, the first working with first Prof. José Nelson Amaral, and the latter two working with Prof. Richard S. Sutton.

SELECTED PUBLICATIONS

Štrupl, M., Faccio, F., **Ashley, D. R.**, Srivastava, R. K., & Schmidhuber, J. (2022). Reward-Weighted Regression Converges to a Global Optimum. *Proceedings of the Thirty-Sixth AAAI Conference on Artificial Intelligence,* 8361–8369. https://doi.org/10.1609/aaai.v36i8.20811

Ashley, D. R. (2020). *Understanding Forgetting in Artificial Neural Networks* [Master's thesis, University of Alberta]. https://doi.org/10.7939/r3-6zvv-5z64

Ashley, D. R., Chockalingam, V., Kuzma, B., & Bulitko, V. (2019). Learning to Select Mates in Evolving Non-playable Characters. *Proceedings of the 2019 IEEE Conference on Games,* 1–8. https://doi.org/10.1109/CIG.2019.8848114

Ashley, D. R., Chockalingam, V., Kuzma, B., & Bulitko, V. (2019). Learning to Select Mates in Artificial Life. *Proceedings of the Genetic and Evolutionary Computation Conference Companion,* 103–104. https://doi.org/10.1145/3319619.3322060

Sherstan, C., **Ashley, D. R.**, Bennett, B., Young, K., White, A., White, M., & Sutton, R. S. (2018). Comparing Direct and Indirect Temporal-Difference Methods for Estimating the Variance of the Return. *Proceedings of the Conference on Uncertainty in Artificial Intelligence,* 63–72. http://auai.org/uai2018/proceedings/papers/35.pdf

Amaral, J. N., Borin, E., **Ashley, D. R.**, Benedicto, C., Colp, E., Hoffmam, J. H. S., Karpoff, M., Ochoa, E., Redshaw, M., & Rodrigues, R. E. (2018). The Alberta Workloads for the SPEC CPU 2017 Benchmark Suite. *Proceedings of the 2018 IEEE International Symposium on Performance Analysis of Systems and Software,* 159–168. https://doi.org/10.1109/ISPASS.2018.00029

HONORS AND AWARDS

Queen Elizabeth II Graduate Scholarship, University of Alberta (C$10,800)	2018
CGS-M, Natural Science and Engineering Research Council of Canada (C$17,500)	2017
Walter H. Johns Graduate Fellowship, University of Alberta (C$5,800)	2017
Science Graduate Scholarship, University of Alberta (C$2,000)	2017
Kao Family Eisenco Scholarship, University of Alberta (C$1,200)	2016
Jason Lang Scholarship, University of Alberta (C$1,000)	2015

Suncor Energy Scholarship, Suncor Energy (C$1,800) 2015
Jason Lang Scholarship, University of Alberta (C$1,000) 2014
Suncor Energy Scholarship, Suncor Energy (C$1,800) 2014

COMMUNITY SERVICE

Faculty of Informatics Council, Università della Svizzera italiana 2022 – 2023
Mentoring Award Adjudication Panel, University of Alberta 2020
Equity, Diversity, and Inclusion Council, Alberta Machine Intelligence Institute 2019 – 2020
Volunteer, Campus Food Bank 2019
Faculty of Graduate Studies and Research Council, University of Alberta 2018 – 2019
Board, Graduate Students' Association 2018 – 2019
Nominating Committee, Graduate Students' Association 2018 – 2019
Council, Graduate Students' Association 2018 – 2020

PROFESSIONAL MEMBERSHIP

Member, Association for Computing Machinery Since 2014
Member, Association for the Advancement of Artificial Intelligence Since 2018
Member, Institute of Electrical and Electronics Engineers Since 2019

REVIEWING

Reviewer, NeurIPS Workshop on Information-Theoretic Principles in Cognitive Systems 2022
Reviewer, NeurIPS Workshop on Reinforcement Learning for Real Life Workshop 2022
Reviewer, European Workshop on Reinforcement Learning 2022

TEACHING

Teaching Assistant, Machine Learning 2022
Teaching Assistant, Algorithms & Data Structures 2022
Teaching Assistant, Machine Learning 2021
Teaching Assistant, Introduction to File and Database Management 2015

CITIZENSHIP AND RESIDENCE PERMITS

Canada: Citizen
South Africa: Citizen
Switzerland: B Permit

LANGUAGES

English: Native Speaker
French: Moderate Fluency
Italian: Minimal Knowledge
Mandarin: Minimal Knowledge