Veronica Chelu

PhD Candidate @ McGill University / Mila, Quebec AI Institute Montreal, Canada

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Research

interests RL & sequential decision making, policy optimization, deep & continual/lifelong learning theoretical & computational neuroscience, neuroplasticity, psychedelic research

Education

2019–present Ph.D. in Computer Science, McGill University, Montreal

Lifelong learning & planning in RL—leveraging optimism, adaptivity & plasticity. Advised by Prof. Doina Precup.

2016–2018 M.Sc in Computer Science, University "Politehnica" Bucharest, Bucharest

Specialization: Artificial Intelligence. *Master Thesis:* The influence of exploratory behaviour on temporal abstraction and subgoal identification in hierarchical reinforcement learning.

2009–2013 **B.Sc in Computer Science**, *University "Politehnica" Bucharest*, Bucharest *Bachelor Thesis*: Emotion simulation on virtual 3D face models.

Academic awards

2022-2024 FRQNT, Fonds de recherche du Quebec, Nature and Technology

2021-2023 IVADO's PhD Excellence scholarship

2020-2021 Borealis AI 2020-2021 Fellowship

2016-2018 **Excellence Scholarship**, for the M.Sc in Computer Science and Engineering at University "Politehnica" Bucharest, funded by the Romanian government

2016-2018 **Merit Scholarship**, for the M.Sc in Computer Science and Engineering at University "Politehnica" Bucharest, funded by the Romanian government

2009-2013 **Merit Scholarship**, for the B.Sc in Computer Science at University "Politehnica" Bucharest, funded by the Romanian government

Industry experience

April 2022 - Research Scientist Intern, DeepMind, Montreal, CA

April 2023 Host: Arthur Guez, Manager: Doina Precup

Feb 2020 - Research Scientist Intern, DeepMind, London, UK, Core RL team

July 2020 Host: Hado van Hasselt, Manager: David Silver

2016–2018 **Research Engineer**, Apsisware, Bucharest, LG Electronics R&D team

Worked on: Scene Understanding for assisted technology and autonomous driving and Generative models with application to facial recognition

2016 Machine Learning Engineer, Sparktech Software, Bucharest

2015 **Software Engineer**, Deutsche Bank, Bucharest

2014 Software Engineer, Misys, Bucharest

2013 **Software Engineer**, Cronian Labs, Bucharest

Academic experience, mentorship, teaching & talks

Summer 2023 **Research mentorship of undergraduate students**, Nathan De Lara (project: Model-based learning for non-stationary continuous control environments), and Steve Wen (project: Adaptive exploration for non-stationary continuous control environments)

June 2023 Talk on Acceleration via Optimism and Adaptivity, Mila RL workshop 2023

Summer 2020 Talk on Forethought and Hindsight in Reinforcement Learning, RL Sofa, Mila 2020

Summer 2020 Teaching assistant and mentor, AI4SocialGood Summer Lab 2020, [details]

Winter 2020 Teaching assistant for the Reinforcement Learning course, McGill University, [Comp767]

- July 2019 Contributed talk on Option Discovery by Aiming to Predict, Modeling Inductive Biases in Reinforcement Learning Workshop, at Reinforcement Learning and Decision Making (RLDM) 2019
- Spring 2018 **Lecturer for Deep Learning for Visual Arts,** Faculty of Mathematics and Computer Science, University of Bucharest
- June 2018 **Applied deep learning for vision, sound and control,** *Faculty of Mathematics and Computer Science, University of Bucharest,* Recent Advances in Artificial Intelligence (RAAI) 2018
- Summer 2018 Lectures and workshops on Reinforcement Learning, University "Politehnica" Bucharest, ROSEdu Romanian Open Source Education, [details]

Committee, reviewing and volunteering

Reviewer @ Conference proceedings, *RLC* (2024), *ICLR* (2024, 2023, 2022), *NeurIPS* (2023, 2021), *ICML* (2023, 2020 (33%))

Reviewer @ Workshops, Deep RL Workshop NeurIPS (2020, 2021) Multitask and Lifelong Reinforcement Learning Workshop ICML (2019), WIML NeurIPS (2018, 2019), Continual Learning Workshop NeurIPS (2018)

Volunteering, Organized the "Professor Series" event for the Reasoning and Learning (RL) lab meetings—where each week we hosted professors from the McGill/Mila ecosystem to give talks on their broad research direction and offer career advice

Training courses

- Fall 2019 **Probabilistic Analysis of Algorithms and Data Structures**, with Prof. Dr. Luc Devroye, COMP 690 at McGill University,
- Summer 2019 Deep Learning and Reinforcement Learning Summer School (DLRL) 2019, at University of Alberta
- Summer 2018 Transylvanian Machine Learning Summer School (TMLSS) 2018, 🔀

Computer & programming skills

- ♦ Python, C, C++, Git, Unix, Latex
- ML/DL Jax, Tensorflow, Pytorch, Numpy, Matplotlib

Life

meditator/yogi (certified instructor 200 hr RYT), self-taught amateur handbalancer & contortionist-in-progress, occasional naïve artist (painting oil on canvas, drawing, digital)