

Steven Morad

PHD STUDENT · REINFORCEMENT LEARNING · SEQUENCE MODELS

Cambridge, UK

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Education

University of Cambridge

PHD COMPUTER SCIENCE

- Advisor: Prof. Amanda Prorok
- Thesis: Efficient Reinforcement Learning in Partially Observable Domains

Cambridge, UK

2021 - 2024 (Est.)

University of Arizona

MS AEROSPACE ENGINEERING

- Advisor: Prof. Jekan Thanga
- Thesis: The Spinning Projectile Extreme Environment Robot

Tucson, AZ, USA

2017 - 2019

University of California, Santa Cruz

BS HONORS COMPUTER SCIENCE

Santa Cruz, CA, USA

2011 - 2015

Professional Experience

- 2022-2023 **Anyscale (RLlib)**, Software Engineer
- 2018-2019 **NASA Jet Propulsion Lab**, Robotics Research Intern
- 2017-2019 **Space and Terrestrial Robotic Exploration Lab**, Research Assistant
- 2015-2017 **Meta**, Production (Software/Systems) Engineer

Selected Publications

PUBLISHED

- Morad, S.D.**, Kortvelesy, R., Liwicki, S., Prorok, A. (2023) *POPGym: Benchmarking Partially Observable Reinforcement Learning*. ICLR.
- Kortvelesy, R., **Morad, S.D.**, Prorok, A. (2023) *Permutation-Invariant Set Autoencoders with Fixed-Size Embeddings for Multi-Agent Learning*. AAMAS.
- Morad, S.D.**, Liwicki, S., Kortvelesy, R., Mecca, R., Prorok, A. (2022). *Modeling Partially Observable Systems using Graph-Based Memory and Topological Priors*. Learning for Dynamics and Control (L4DC).
- Morad, S.D.**, Mecca, R., Poudel, R., Liwicki, S., Cipolla, R. (2020). *Embodied Visual Navigation with Automatic Curriculum Learning in Real Environments*. Dual publication in Robotics and Automation Letters and ICRA.
- Morad, S.D.**, Nash, J., Higa, S., Smith, R., Parness, A., and Barnard, K. (2019). *Improving Visual Feature Extraction in Glacial Environments*. Dual publication in Robotics and Automation Letters and ICRA.

IN REVIEW

- Morad, S.D.**, Kortvelesy, R., Liwicki, S., Prorok, A. (2023) *Reinforcement Learning with Fast and Forgetful Memory*. NeurIPS.
- Kortvelesy, R., **Morad, S.D.**, Prorok, A. (2023) *Generalised f-Mean Aggregation for Graph Neural Networks*. NeurIPS.

Awards, Fellowships, & Grants

- 2023 **2nd Best Research Talk**, Jesus College Graduate Conference, University of Cambridge -
- 2021 **Graduate Research Studentship**, Toshiba Research £ 149,953
- 2015 **Cum Laude**, University of California, Santa Cruz -

Invited Talks

2023 **An Introduction to Reinforcement Learning**, Toshiba Research Seminar

Teaching Experience

2024 Est. **Introduction to Reinforcement Learning**, Adjunct Lecturer

2022 **Introduction to Robotics**, Teaching Assistant

2021 **Mobile Robot Systems**, Teaching Assistant

Mentoring

2022-2023 **Dulhan Jayalath**, MPhil, University of Cambridge Now: PhD at Oxford

2023-2024 **Mark Li**, Part II, University of Cambridge

2021-2022 **James Read**, Part II, University of Cambridge

Outreach & Professional Development

SERVICE AND OUTREACH

2023 **UC Santa Cruz**, Mentor

2018 **Boys and Girls Club**, Volunteer

Remote

Tucson

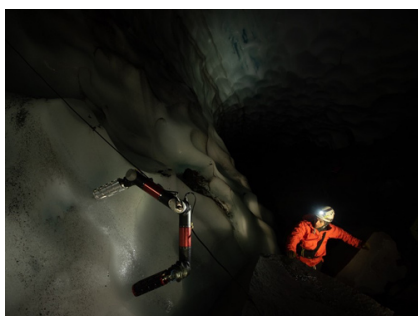
PEER REVIEW

NeurIPS

ICLR

ICRA/RA-L

PROJECT MEDIA



(a) (NASA/JPL internships) Evaluating mobility and vision in icy environments



(b) (M.S. Thesis) Sensor node using two-axis spin stabilization (precession) for rocket motor exhaust vectoring, achieving soft touchdown at 10cm/s after an 8.7m drop. The system was designed for Lunar lava tube descent and mapping.