Vihang Patil
Ph.D Student in Reinforcement and Deep Learning

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EDUCATION

Johannes Kepler Universität Linz — Linz, Austria
Ph.D. student in Reinforcement Learning advised by Prof. Sepp Hochreiter — *Sep. 2019 – Ongoing*

Universita Della Svizzera Italiana — Lugano, Switzerland
Master of Science in Artificial Intelligence (9.00/10) — *2017 – 2019*

ETH Zurich — Zurich, Switzerland
Exchange Semester and Master Thesis — *2018 – 2019*

University of Mumbai — Mumbai, India
Bachelor of Engineering in Electronics (First Class) — *2011 – 2015*

RESEARCH EXPERIENCE

Amazon — Seattle, USA
Applied Science Intern - AGI — *September 2023 - December 2023*

Amazon — Seattle, USA
Applied Science Intern - Alexa AI — *January 2022 - May 2022*

Institute for Machine Learning, Johannes Kepler Universität Linz — Austria
Research Assistant - Advised by Prof. Sepp Hochreiter — *Sep 2019 - Ongoing*

Data Analytics Group, ETH Zurich — Zurich, Switzerland
Master Thesis Student - Advised by Dr. Aurelien Lucchi — *Oct 2018 - Sep 2019*

Institute for Machine Learning, Johannes Kepler Universität Linz — Austria
Visiting Student Researcher - Advised by Prof. Sepp Hochreiter — *Jun 2018 - Nov 2018*

University of Mumbai — Mumbai, India
Student Researcher - Advised by Prof. Sandeep Mishra — *May 2014 - May 2015*

RESEARCH PAPERS

Retrieval-Augmented Decition Transformer: External Memory for In-Context RL
T. Schmied, F. Paischer, V. Patil, M. Hofmarcher, R. Pascanu, S. Hochreiter (Under Review)

Simplified Priors for Object-Centric Learning
V. Patil, A. Radler, D. Klotz, S. Hochreiter (COLLAS 2024)

Contrastive Abstraction for Reinforcement Learning
V. Patil, E. Rumetshofer, M. Hofmarcher, S. Hochreiter (NeuRIPS, Gen Plan Workshop 2023)

MyoChallenge 2022: Learning contact-rich manipulation using a musculoskeletal hand
V. Caggiano,..,V. Patil,...,Vikash Kumar (NeuRIPS 2022)

InfODist: Online distillation with Informative rewards improves generalization
Siripurapu, Patil, Schweighofer, Dinu, Schmied, Holzleitner, Eghbal-Zadeh, Kopp, Hochreiter (NeuRIPS, DRL Workshop 2022)

Align-RUDDER: Learning From Few Demonstrations
V. Patil, M. Hofmarcher, M. Dinu, M. Dorfer, P. Blies, J. Brandstetter, J. Arjona, S. Hochreiter (ICML 2022)

History Compression via Language Models in Reinforcement Learning
F. Paischer, T. Adler, V. Patil, A. Bitto, S. Lehner, H. Eghbal-Zadeh, S. Hochreiter (ICML 2022)

A Globally Convergent Evolutionary Strategy for Stochastic Constrained Optimization
V. Patil, Youssef Diouane*, Aurelien Lucchi* (AISTATS 2022)*

- **A Dataset Perspective on Offline Reinforcement Learning**
  K. Schweighofer, A. Radler, M. Dinu, M. Hofmarcher, <u>V. Patil</u>, A. Bitto, H. Zadeh, S. Hochreiter (COLLAS 2022)

- **XAI and Strategy Extraction via Reward Redistribution**
  M. Hofmarcher, M. Dinu, <u>V. Patil</u>, M. Dorfer, P. Blies, J. Brandstetter, J. Arjona, S. Hochreiter (XXAI - Book Chapter)

- **Reactive Exploration to Cope with Non-Stationarity in Lifelong Reinforcement Learning**
  C. Steinparz, T. Schmied, F. Paischer, M. Dinu, <u>V. Patil</u>, A. Bitto, H. Zadeh, S. Hochreiter (COLLAS 2022)

- **Understanding the effect of Dataset Composition on Offline Reinforcement Learning**
  K. Schweighofer, M. Dinu, M. Hofmarcher, A. Bitto, P. Renz, <u>V. Patil</u>, S. Hochreiter (NeuRIPS, DRL workshop 2021)

- **Modern Hopfield Networks for Return Decomposition for Delayed Rewards**
  M. Widirich, M. Hofmarcher, A. Bitto, <u>V. Patil</u>, S. Hochreiter (NeuRIPS, DRL workshop 2021)

- **Guided Search for Maximum Entropy Reinforcement Learning**
  <u>V. Patil</u>

RESEARCH COMPETITIONS

- **MyoChallenge at Neurips 2022**
  Co-Winners of the MyoChallenge 2022 at Neurips 2022   *Aug 2022 - Nov 2022*
- **Robocon**   *Mumbai, India*
  Programmer/Team Leader - Built various kinds of robots   *Dec 2013 - Mar 2015*

APPLIED ML EXPERIENCE

- **Fractal.ai**   *Mumbai, India*
  Associate (Data Science)   *Jan 2016 - Jul 2017*

OTHER

- **Program Chair**
  ***AAAI** (2025)*

- **Reviewing Conferences**
  ***NeurIPS** (2024, 2023, 2022, 2021, 2020), **ICML** (2024, 2023, 2022, 2021, 2020), **ICLR** (2025, 2022, 2021, 2020)*

- **Deep Reinforcement Learning**   *Austria*
  Teaching Assistant - Johannes Kepler Universität Linz   *2024, 2023, 2021, 2020 Summer Semester*

TECHNICAL SKILLS

- **Languages**: Python, C++, MATLAB, R, HTML, CSS

- **Frameworks**: Pytorch, Tensorflow

SCHOLARSHIPS

- **LIT AI Lab PhD Scholarship**
                                                                                      2019 – 2024

- **Tution Fee Waiver Scholarship, Govt. of India**
  Awarded to top 5% of the class.   *2011 – 2015*

LINKS

- Github, Website, Google Scholar, Twitter