Vihang Patil

Ph.D Student in Reinforcement and Deep Learning

Email : patil@ml.jku.at, vihangppatil@gmail.com
http://vihangp.github.io, Google Scholar
Mobile : +1 206 671 8808, +43-68120227129

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*

Applied ML Experience

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

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*

Research Papers

- **Simplified Priors for Object-Centric Learning**
  V. Patil, A. Radler, D. Klotz, S. Hochreiter (Under reivew @COLLAS 2024)
- **Contrastive Abstraction for Reinforcement Learning**
  V. Patil, E. Rumetshofer, M. Hofmarcher, S. Hochreiter (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 (Deep RL 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, V. Patil, A. Bitto, H. Zadeh, S. Hochreiter (COLLAS 2022)
- **XAI and Strategy Extraction via Reward Redistribution**
  M. Hofmarcher, M. Dinu, V. Patil, 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, V. Patil, 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, V. Patil, S. Hochreiter (Deep RL workshop Neurips 2021)
- **Modern Hopfield Networks for Return Decomposition for Delayed Rewards**
  M. Widirich, M. Hofmarcher, A. Bitto, V. Patil, S. Hochreiter (Deep RL workshop Neurips 2021)
- **Guided Search for Maximum Entropy Reinforcement Learning**
  V. Patil

Other

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