

Pim de Haan

pimdehaan@gmail.com pimdehaan.com

Curriculum Vitae

Research interests

Machine Learning; Reinforcement Learning; Representation Learning; Causality; Application of Geometry, Topology and Group Theory to Deep Learning. Application of Deep Learning methods to Physical Science.

Experience

- **Research Associate**, Qualcomm AI Research, Netherlands 04/2019–present
- **Machine Learning Consultant**, *Netherlands* 11/2017–03/2019
 - Designed and built time series analysis for energy monitoring start-up
- **AI Developer**, FeedbackFruits, *Netherlands* 10/2016–11/2017
 - Built distributed recommendation systems
 - Led the AI team by developing roadmaps, planning sprints and conducting code reviews
- **Co-founder and Developer**, IGNE, *Netherlands* 01/2013–10/2015
 - Built full-stack web applications for start-ups in Health Tech and Fin Tech

Education

- **University of Amsterdam, QUVA lab**, PhD candidate 04/2019–present
 - Supervised by Max Welling
- **University of Amsterdam**, Master in Artificial Intelligence 07/2016–present
 - Current GPA: 9.2/10
 - Expected graduation: May 2019
- **University of California, Berkeley**, Visiting Research Scholar 03/2018–12/2018
 - Supervised by Sergey Levine
- **University of Cambridge**, Master in Theoretical Physics 10/2015–06/2016
 - With Honours
- **University of Amsterdam**, Bachelor in Physics and Astronomy 07/2011–06/2015
 - Cum Laude (with distinction)
 - Thesis on Low Dimensional Black Holes supervised by Diego Hoffman
 - Student Representative
- **University of Edinburgh**, Exchange Student in Theoretical Physics 08/2014–12/2014

Publications

- **Pim de Haan**, Dinesh Jayaraman, Sergey Levine:
Causal Confusion in Imitation Learning (Spotlight talks at NeurIPS 2018 workshops on Imitation Learning and its Challenges in Robotics and on Causal Learning)
- Luca Falorsi, **Pim de Haan**, Tim R. Davidson, Patrick Forré:
Reparameterizing Distributions on Lie Groups (Oral at AISTATS 2019)
- **Pim de Haan***, Luca Falorsi*:
Topological Constraints on Homeomorphic Auto-Encoding (NeurIPS 2018 workshop on Integration of Deep Learning Theories)
- Luca Falorsi*, **Pim de Haan***, Tim R. Davidson*, Nicola De Cao, Maurice Weiler, Patrick Forré, Taco S. Cohen:

Explorations in Homeomorphic Variational Auto-Encoding (ICML 2018 workshop on Theoretical Foundations and Applications of Deep Generative Models)

Selected Projects

- Non-symmetric Metric Representation Learning for Reinforcement Learning, with Sergey Levine (Work in Progress)
- Application of Equivariant Neural Networks to solutions of Schrödinger's equation on Quantum Lattice Systems, with Taco Cohen and Max Welling (2017)

Technology

- Python, NumPy, Pandas, TensorFlow, PyTorch
- Ruby, Rails, JavaScript, Node, EmberJS, Apache Kafka
- Learning: Clojure, Haskell, Rust
- Contributed to: OpenAI Baselines, NumPy, Sacred