Pratik Gajane

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Academic experience

2021 to - **Eindhoven University of Technology (The Netherlands)**
Position **Postdoctoral researcher**
Adviser Prof. Mykola Pechenizkiy

2018 to 2021 **Montanuniversität Leoben (Austria)**
Position **Postdoctoral researcher**
Advisers Prof. Peter Auer and Prof. Ronald Ortner

Education

2014 to 2017 **INRIA Lille-team SequeL, Université Lille & Orange labs (France)**
Qualification **PhD**
Thesis Sequential learning and decision making with partial feedback
Advisers Prof. Philippe Preux and Dr. Tanguy Urvoy

2012 to 2014 **IIT Madras (India)**
Qualification **Master of Technology in Computer Science**, CGPA : **9.19/10**
Thesis Methods for the Multi-Armed Bandit problem
Adviser Prof. Balaraman Ravindran

2005 to 2009 **University of Pune (India)**
Qualification **Bachelor of Engineering in Computer Science**, **First Class**

Preprints

- Pratik Gajane, Akrati Saxena, Maryam Tavakol, George Fletcher and Mykola Pechenizkiy. "Survey on Fair Reinforcement Learning: Theory and Practice".
- Pratik Gajane, Peter Auer and Ronald Ortner. "Autonomous Exploration for Navigating in MDPs using Blackbox RL Algorithms".
- Pratik Gajane, Ronald Ortner, Peter Auer and Csaba Szepesvari. "Autonomous exploration for navigating in non-stationary CMPs". URL .
- Sayantan Bhadra, Pratik Gajane and Balaraman Ravindran, "A Rank Correlation Based Method for the Stochastic Budgeted Multi-armed Bandit Problem".

Publications

- Danil Provodin, Pratik Gajane, Mykola Pechenizkiy and Maurits Kaptein. An Empirical Evaluation of Posterior Sampling for Constrained Reinforcement Learning. In the Reinforcement Learning for Real Life Workshop at NeurIPS, 2022
- Danil Provodin, Pratik Gajane, Mykola Pechenizkiy and Maurits Kaptein. "The Impact of Batch Learning in Stochastic Linear Bandits, in the proceedings of the 22nd International Conference on Data Mining (ICDM), 2022.
- Danil Provodin, Pratik Gajane, Mykola Pechenizkiy and Maurits Kaptein. "The Impact of Batch Learning in Stochastic Bandits", in the workshop on Ecological Theory of Reinforcement Learning, NeurIPS 2021.
- Filipo Studzinski Perotto, Sattar Vakili, Pratik Gajane, Yaser Faghan and Mathieu Bourgais. "Gambler Bandits and the Regret of Being Ruined", in the proceedings of the 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2021.

- Ronald Ortner, Pratik Gajane and Peter Auer. "Variational Regret Bounds for Reinforcement Learning", in the proceedings of the 35th Conference on Uncertainty in Artificial Intelligence (UAI), 2019.
- Peter Auer, Pratik Gajane and Ronald Ortner. "Adaptively Tracking the Best Bandit Arm with an Unknown Number of Distribution Changes", in the proceedings of the 32nd Annual Conference on Learning Theory (COLT), 2019.
- Peter Auer, Yifang Chen, Pratik Gajane, Chung-Wei Lee, Haipeng Luo, Ronald Ortner and Chen-Yu Wei. "Achieving Optimal Dynamic Regret for Non-stationary Bandits without Prior Information", in the proceedings of the 32nd Annual Conference on Learning Theory (COLT), 2019.
- Pratik Gajane, Ronald Ortner and Peter Auer. "A Sliding-Window Approach for Reinforcement Learning in MDPs with Arbitrarily Changing Rewards and Transitions", in Lifelong Learning: A Reinforcement Learning Approach Workshop at FAIM 2018. **Best Paper Award**.
- Pratik Gajane and Mykola Pechenizkiy. "On Formalizing Fairness in Prediction with ML", in the 5th Workshop on Fairness, Accountability, and Transparency in Machine Learning (FAT/ML) 2018.
- Pratik Gajane, Tanguy Urvoy and Emilie Kaufmann. "Corrupt Bandits for Preserving Local Privacy", in the proceedings of the 29th International Conference on Algorithmic Learning Theory (ALT) 2018.
- Carolin Lawrence, Pratik Gajane and Stefan Riezler. "Counterfactual Learning for Machine Translation: Degeneracies and Solutions", in the workshop for Causal Inference and Machine Learning for Intelligent Decision Making, NeurIPS 2017.
- Pratik Gajane, Tanguy Urvoy and Emilie Kaufmann. "Corrupt bandits", in the 13th European Workshop on Reinforcement Learning (EWRL) 2016.
- Pratik Gajane, Tanguy Urvoy and Fabrice Clerot. "A Relative Exponential Weighing Algorithm for Adversarial Utility-based Dueling Bandits", in the proceedings of the 32nd International Conference on Machine Learning (ICML), 2015.
- Pratik Gajane and Tanguy Urvoy. "Utility-based Dueling Bandits as a Partial Monitoring Game", in the 12th European Workshop on Reinforcement Learning (EWRL) 2015.

Skills

Informatics

Programming C, C++, Java, Python, MATLAB

ML tools Tensorflow, Weka (Waikato Environment for Knowledge Analysis), RapidMiner

Misc. LaTeX, Apache Subversion, HTML/CSS, OS: GNU/Linux, Windows

Languages

English Proficient level **French** Intermediate level **German** Elementary level

Dutch Elementary level

Professional activities

Reviewer JMLR, ICML, NeurIPS, AISTATS, ALT, ICLR, UAI, ACM FAccT, Journal for General Philosophy of Science, Frontiers

Program committee European Workshop on Reinforcement Learning 2018, Trustworthy NLP workshop 2021

Teaching

2022-23 Q1 Reinforcement Learning track
2021-22 Q4 Data Intelligence (Supervision)
2013-14 S1 Introduction to Machine Learning (TA)
2012-13 S1 Introduction to Research (TA)
2022-23 Q1 Embodying Intelligent Behavior in Social Context
2013-14 S2 Data Mining (TA)
2012-13 S2 Computational Engineering (TA)

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Invited talks

Sept 4, 2019	DeepMind, Google London
Dec 28, 2018	IIT Madras, Department of Computer Science and Engineering
Nov 22, 2017	Montanuniversität Leoben, Lehrstuhl für Informationstechnologie
June 7, 2017	Heidelberg University, Statistical Natural Language Processing Colloquium

Projects

Jan 2013 - June 2014	Methods for the Multi-Armed Bandit problem
Jan 2013 - May 2013	Constrained Non-negative Matrix Factorization using linear programming
Aug 2012 - Dec 2012	Intelligent Othello player

Industry experience

2009-2011	Infosys Information technology consulting company, *Systems Engineer*

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