Pratik Gajane

	+31-633-313-415	Google Scholar ID	L_5GdNcAAAAJ
work ✉	p.gajane@tue.nl	ORCID	0000-0002-8087-5661
personal ✉	pratik.gajane@gmail.com	personal webpage	pratikgajane.github.io

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 Dr. Ronald Ortner

Education

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

2012 to 2014 **Indian Institute of Technology 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

[1] Ronald C. van den Broek, Rik Litjens, Tobias Sagis, Luc Siecker, Nina Verbeeke and Pratik Gajane. Generalizing distribution of partial rewards for multi-armed bandits with temporally-partitioned rewards. arXiv:2211.06883.

[2] Pratik Gajane, Akrati Saxena, Maryam Tavakol, George Fletcher and Mykola Pechenizkiy. Survey on Fair Reinforcement Learning: Theory and Practice. arXiv:2205.10032.

[3] Pratik Gajane, Peter Auer and Ronald Ortner. Autonomous Exploration for Navigating in MDPs using Blackbox RL Algorithms.

[4] Pratik Gajane, Ronald Ortner, Peter Auer and Csaba Szepesvari. Autonomous exploration for navigating in non-stationary CMPs. arXiv:1910.08446.

[5] Sayantan Bhadra, Pratik Gajane and Balaraman Ravindran. A Rank Correlation Based Method for the Stochastic Budgeted Multi-armed Bandit Problem.

Peer-reviewed Publications

[6] Pratik Gajane. Local Differential Privacy for Sequential Decision Making in a Changing Environment. *AAAI Privacy Preserving Artificial Intelligence (PPAI)*, 2023.

[7] 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.

[8] Danil Provodin, Pratik Gajane, Mykola Pechenizkiy and Maurits Kaptein. The Impact of Batch Learning in Stochastic Linear Bandits, in *proceedings of the 22nd International Conference on Data Mining (ICDM)*, 2022.

[9] 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 at NeurIPS* 2021.

[10] Filipo Studzinski Perotto, Sattar Vakili, Pratik Gajane, Yaser Faghan and Mathieu Bourgais. Gambler Bandits and the Regret of Being Ruined, in *proceedings of the 20th International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2021.

[11] Ronald Ortner, Pratik Gajane and Peter Auer. Variational Regret Bounds for Reinforcement Learning, in *proceedings of the 35th Conference on Uncertainty in Artificial Intelligence (UAI)*, 2019.

[12] Peter Auer, Pratik Gajane and Ronald Ortner. Adaptively Tracking the Best Bandit Arm with an Unknown Number of Distribution Changes, in *proceedings of the 32nd Annual Conference on Learning Theory (COLT)*, 2019.

[13] 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 *proceedings of the 32nd Annual Conference on Learning Theory (COLT)*, 2019.

[14] 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.

[15] 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.

[16] Peter Auer, Pratik Gajane and Ronald Ortner. Adaptively Tracking the Best Bandit Arm with an Unknown Number of Distribution Changes. In *the 14th European Workshop on Reinforcement Learning (EWRL)*, 2018.

[17] Pratik Gajane, Tanguy Urvoy and Emilie Kaufmann. Corrupt Bandits for Preserving Local Privacy, in *proceedings of the 29th International Conference on Algorithmic Learning Theory (ALT)*, 2018.

[18] 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 at NeurIPS* 2017.

[19] Pratik Gajane, Tanguy Urvoy and Emilie Kaufmann. Corrupt bandits, in *the 13th European Workshop on Reinforcement Learning (EWRL)*, 2016.

[20] Pratik Gajane, Tanguy Urvoy and Fabrice Clerot. A Relative Exponential Weighing Algorithm for Adversarial Utility-based Dueling Bandits, in *proceedings of the 32nd International Conference on Machine Learning (ICML)*, 2015.

[21] Pratik Gajane and Tanguy Urvoy. Utility-based Dueling Bandits as a Partial Monitoring Game, in *the 12th European Workshop on Reinforcement Learning (EWRL)*, 2015.

Teaching

2022-23 Q2	Data Mining(Co-lecturer)	BS	140 stundets	Eindhoven Univ. of Technology
2022-23 Q1	Reinforcement Learning (Responsible lecturer)	MS	35 students	Eindhoven Univ. of Technology
2022-23 Q1	Embodying Intelligent Behavior in Social Context (Co-lecturer)	MS	41 students	Eindhoven Univ. of Technology
2021-22 Q4	Data Intelligence (Project supervision)	MS	50 students	Eindhoven Univ. of Technology
2013-14 S2	Data Mining (TA)	BS	~ 20 students	IIT Madras
2013-14 S1	Introduction to Machine Learning (TA)	BS	~ 60 students	IIT Madras
2012-13 S2	Computational Engineering (TA)	BS	~ 50 students	IIT Madras
2012-13 S1	Introduction to Research (TA)	BS	~100 students	IIT Madras

Pedagogical Courses

2022	Teaching Skills (UTQ/BKO Module)	Eindhoven University of Technology
2022	Designing Courses & Projects (UTQ/BKO Module)	Eindhoven University of Technology
2022	Facilitating Learning (UTQ/BKO Module)	Eindhoven University of Technology
2021	Supervision of PhD Students	Eindhoven University of Technology

Supervision

Co-supervisor for following students :

PhD

2022-Present	Vishnu Veparala	Continual Learning
2021-Present	Danil Provodin	Constrained Sequential Learning (in collaboration with a multinational company)

MSc

2022-Present	Ricardo v. d. Aa	Predictive Models for Inventory Control (in collaboration with a multinational company)
2022-Present	Joost v.d. Haar	Supply Chain Management using ML (in collaboration with a multinational company)
2022-Present	Jiong Li	Exploration in Reinforcement Learning with Sparse Rewards
2022-Present	Wouter v. d. Wee	Curiosity-driven Fairness in Reinforcement Learning

Projects

Feb 2021 - Present	Dutch Research Council (NWO) TOP TEPAIV project	Researcher
Feb 2018 - Jan 2021	CHIST-ERA project - Dynamically Evolving Long-Term Autonomy (DELTA)	Partner

Professional Activities

Reviewer	JMLR, ICML, NeurIPS (Top Reviewer), AISTATS, AAAI, ICLR, ACM Conference on Fairness, Accountability, and Transparency, Journal for General Philosophy of Science
Program Committee	UAI (Top Program Committee Member 2022), ALT, IJCAI, European Workshop on Reinforcement Learning, Trustworthy NLP Workshop
Editorial Board	Frontiers in Big Data

Outreach

2013 to 2014	Student head coordinator for the wellness and outreach initiative at Indian Institute of Technology Madras
2022 to -	Volunteer for the Diversity and Inclusion Task Force at Eindhoven University of Technology

Selected 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

Industry Experience

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

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 **French** Intermediate **German** Elementary **Dutch** Elementary

Department of Mathematics and Computer Science, MF 7.100, Eindhoven University of Technology, 5612AP, Eindhoven, The Netherlands