Curriculum Vitae

Rati DEVIDZE

PERSONAL DATA

PLACE AND DATE OF BIRTH:	Chiatura, Georgia|1994
ADDRESS:	Campus E1.5, Saarbrücken, Germany
PHONE:	+49 1577 4107975
EMAIL:	rdevidze@mpi-sws.org
WEB SITE:	Rati Devidze

EDUCATION

10/2018 - TODAY	PhD student at **Max Planck Institute for Software Systems** Saarbrücken, Germany **Interests:** *Reinforcement Learning, Machine Learning, Machine Teaching*
10/2016 - 09/2018	Graduate School of Computer Science **Saarland University**, Saarbrücken, Germany **Selected Courses:** *The Elements of Statistical Learning, Deep Learning, Information Retrieval and Data Mining, Cryptography, Database Systems*
09/2012 - 07/2016	Bachelor of Science, Computer Science **Tbilisi State University**, Tbilisi, Georgia **Selected Courses:** *Algorithms and Data Structures, Statistics, Discrete Mathematics, Operation Research, Multivariable Calculus, Linear Algebra* GPA: 4/4
08/2014 - 09/2014	DAAD Summer School **RWTH Aachen University**, Aachen, Germany

Work Experience

03/2016 - 08/2016	*.Net Software Developer* *Prodware Group* *Tbilisi, Georgia* • Implemented new software products for business ideas • Added new functionalities to existing softwares and fix old bugs
04/2014 - 03/2016	*Engineer Programmer* *Akhali Kselebi Ltd* *Tbilisi, Georgia* • Implemented desktop applications for the station operators • Analysed international call statistic using ASP.NET • Implemented Windows and Web-services of billing system for Telecommunications

Projects

03/2018 - 05/2018	**MPI-SWS** *Research Immersion lab* with **Dr. Adish Singla** • Worked on the iterative machine teaching problem in the context of Markov Decision Process • Implemented Markov Decision Process solver and did experiments to evaluate theoretical results
07/2017 - 09/2017	**CISPA** *Research Immersion lab* with **Prof. Michael Backes** • Worked on accountability of security protocols • Analyzed security of these protocols using theorem prover Tamarin
03/2014 - 07/2014	**Tbilisi State University** *Semester Project with* **Prof. Ramaz Botschorishvili** • Worked on deriving mathematical formulation of the coupling of ODE & PDE models for parallel numerical simulations
03/2015 - 07/2015	**Tbilisi State University** *Semester Project with* **Prof. Alexander Gamkrelidze** • Worked on adaptation process of an open source OCR system to digitize Georgian alphabet

Honors and Awards

09/2016 - Today	*Graduate School of Computer Science* (3% of the applicants are selected)
08/2014 - 09/2014	*German Academic Exchange Service (DAAD)*
09/2012 - 07/2016	*President's Scholarship at the Tbilisi State University*

Programming Languages

Python, C++, C#

Spoken Languages

GEORGIAN:	Mother tongue
ENGLISH:	Fluent
GERMAN:	Fluent
RUSSIAN:	Intermediate

Publications

1. Rati Devidze, Parameswaran Kamalaruban, and Adish Singla. Exploration-guided reward shaping for reinforcement learning under sparse rewards. In *Advances in Neural Information Processing Systems 36th Annual Conference on Neural Information Processing Systems 2022, NeurIPS 2022 (To appear)*

2. Rati Devidze, Goran Radanovic, Parameswaran Kamalaruban, and Adish Singla. Explicable reward design for reinforcement learning agents. In *Advances in Neural Information Processing Systems 35th Annual Conference on Neural Information Processing Systems 2021, NeurIPS 2021*

3. Gaurav Yengera, Rati Devidze, Parameswaran Kamalaruban, and Adish Singla. Curriculum design for teaching via demonstrations: Theory and applications. In *Advances in Neural Information Processing Systems 35th Annual Conference on Neural Information Processing Systems 2021, NeurIPS 2021*

4. Parameswaran Kamalaruban, Rati Devidze, Volkan Cevher, and Adish Singla. Environment shaping in reinforcement learning using state abstraction. *CoRR*, abs/2006.13160, 2020

5. Amin Rakhsha, Goran Radanovic, Rati Devidze, Xiaojin Zhu, and Adish Singla. Policy teaching via environment poisoning: Training-time adversarial attacks against reinforcement learning. In *Proceedings of the 37th International Conference on Machine Learning, ICML 2020, 13-18 July 2020, Virtual Event,* Proceedings of Machine Learning Research, 2020

6. Rati Devidze, Farnam Mansouri, Luis Haug, Yuxin Chen, and Adish Singla. Understanding the power and limitations of teaching with imperfect knowledge. In *Proceedings of the Twenty-Ninth International Joint Conference on Artificial Intelligence, IJCAI 2020.* ijcai.org, 2020

7. Sebastian Tschiatschek, Ahana Ghosh, Luis Haug, Rati Devidze, and Adish Singla. Learner-aware teaching: Inverse reinforcement learning with preferences and constraints. In *Advances in Neural Information Processing Systems 32: Annual Conference on Neural Information Processing Systems 2019, NeurIPS 2019,* 2019

8. Parameswaran Kamalaruban, Rati Devidze, Volkan Cevher, and Adish Singla. Interactive teaching algorithms for inverse reinforcement learning. In *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China, August 10-16, 2019,* pages 2692–2700, 2019

9. Goran Radanovic, Rati Devidze, David C. Parkes, and Adish Singla. Learning to collaborate in markov decision processes. In *Proceedings of the 36th International Conference on Machine Learning, ICML 2019,* pages 5261–5270, 2019