

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 | <i>.Net Software Developer</i>
<i>Prodware Group</i>
<i>Tbilisi, Georgia</i> <ul style="list-style-type: none">• Implemented new software products for business ideas• Added new functionalities to existing softwares and fix old bugs |
| 04/2014 - 03/2016 | <i>Engineer Programmer</i>
<i>Akhali Kselebi Ltd</i>
<i>Tbilisi, Georgia</i> <ul style="list-style-type: none">• 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
<i>Research Immersion lab with Dr. Adish Singla</i> <ul style="list-style-type: none">• 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
<i>Research Immersion lab with Prof. Michael Backes</i> <ul style="list-style-type: none">• Worked on accountability of security protocols• Analyzed security of these protocols using theorem prover Tamarin |
| 03/2014 - 07/2014 | Tbilisi State University
<i>Semester Project with Prof. Ramaz Botschorishvili</i> <ul style="list-style-type: none">• Worked on deriving mathematical formulation of the coupling of ODE & PDE models for parallel numerical simulations |
| 03/2015 - 07/2015 | Tbilisi State University
<i>Semester Project with Prof. Alexander Gamkrelidze</i> <ul style="list-style-type: none">• 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, 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, (To appear)*
2. 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, (To appear)*
3. Parameswaran Kamalaruban, Rati Devidze, Volkan Cevher, and Adish Singla. Environment shaping in reinforcement learning using state abstraction. *CoRR*, abs/2006.13160, 2020
4. 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

5. 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
6. 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
7. 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
8. 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