

# MARYAM TAVAKOL

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## RESEARCH INTERESTS

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Machine Learning, Reinforcement Learning and Multi-armed Bandits, Recommendation Systems, Deep Learning, and Application of Machine Learning in Real-World Problems.

## EDUCATION

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**Technical University of Darmstadt**, Darmstadt, Germany  
Doctor of Philosophy in Computer Science, Machine Learning September 2013 – April 2019  
Thesis: “Contextual Models for Sequential Recommendation”

**University of Tehran**, Tehran, Iran  
Master of Science in Artificial Intelligence, GPA: 18.64/20 (ranked 1st) September 2010 – March 2013  
Thesis: “A Distributed Learning System with Multiple Reward Sources”

**University of Tehran**, Tehran, Iran  
Bachelor of Science in Computer Engineering, GPA: 17:04/20 (top 10%) September 2006 – September 2010  
Thesis: “Efficient Routing in Distributed Real-Time Systems”

## PROFESSIONAL EXPERIENCE

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Postdoctoral Researcher in Artificial Intelligence Group March 2019 – Present  
**Technical University of Dortmund**, Dortmund, Germany

Research Assistant in Machine Learning Group, February 2016 – February 2019  
**Leuphana University of Lüneburg**, Lüneburg, Germany

Research Assistant in Knowledge Engineering Group, November 2016 – July 2017  
**Technical University of Darmstadt**, Darmstadt, Germany

Research Intern in **Criteo Co.**, Paris, France August 2015 – January 2016

Teaching Assistant in Knowledge Mining and Assessment Group, January 2015 – April 2015  
**Technical University of Darmstadt**, Darmstadt, Germany

Research Assistant in Knowledge Mining and Assessment Group, September 2013 – July 2015  
**Technical University of Darmstadt**, Darmstadt, Germany

Junior Reasercher in **Sepanta Co.**, Tehran, Iran June 2012 – August 2013

## PUBLICATIONS

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1. U. Dick, **M. Tavakol**, and U. Brefeld, “Rating Continuous Actions in Spatial Multi-Agent Problems,” Machine Learning Journal (final prepararion).
2. H. Zafar, **M. Tavakol**, and J. Lehmann, “MDP-based Shallow Parsing in Distantly Supervised QA Systems,” CoNLL 2019 (under review).
3. **M. Tavakol**, S. Mair, and K. Morik, “HyperUCB: Hyperparameter Optimization using Contextual Bandits,” ECML Workshop on Automated Data Science, 2019.
4. **M. Tavakol**, T. Joppen, U. Brefeld, and J. Fürnkranz, “Personalized Transaction Kernels for Recommmen-  
dation via MCTS,” KI 2019.
5. R. Gaonkar, **M. Tavakol**, and U. Brefeld, “MDP-based Itinerary Recommendation using Geo-Tagged Social  
Media,” International Symposium on Intelligent Data Analysis, IDA 2018.
6. **M. Tavakol** and U. Brefeld, “A Unified Contextual Bandit Framework for Long- and Short-Term Recommen-  
dations,” Joint European Conference on Machine Learning and Knowledge Discovery in Databases, ECML 2017.
7. **M. Tavakol** and U. Brefeld, “A Preference-Based Bandit Framework for Personalized Recommendation,”

DA2PL 2016.

8. **M. Tavakol**, H. Zafartavanaelmi, and U. Brefeld, “Feature Extraction and Aggregation for Predicting the Euro 2016,” Proceedings of the ECML Workshop on Sport Analysis, 2016.
9. **M. Tavakol** and U. Brefeld, “Factored MDPs for Detecting the Topic of User Sessions,” Proceedings of the ACM Conference on Recommender Systems, RecSys 2014.
10. **M. Tavakol**, M. N. Ahmadabadi, M. Mirian, and M. Asadpour, “A Distributed Q-Learning Approach for Variable Attention to Multiple Critics,” International Conference on Neural Information Processing, ICONIP 2012.

## TEACHING EXPERIENCE

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1. **Technical University of Dortmund**, Dortmund, Germany  
Teaching Assistant in Computer Vision Spring 2019
2. **Leuphana University of Lüneburg**, Lüneburg, Germany  
Teaching Assistant/Lecturer in Data Mining Seminar Spring 2017, Spring 2018  
Lecturer in Introduction to Python Programming Fall 2016, Fall 2018  
Teaching Assistant/Lecturer in Recommender Systems Seminar Fall 2016, Fall 2017, Fall 2018  
Teaching Assistant in Intelligent Data Analysis Spring 2016
3. **Technical University of Darmstadt**, Darmstadt, Germany  
Teaching Assistant in Mining Facebook Spring 2015  
Teaching Assistant in Recommender Systems Seminar Fall 2014
4. **University of Tehran**, Tehran, Iran  
Teaching Assistant in Advanced Robotics Spring 2012  
Teaching Assistant in Intelligent Systems Spring 2012  
Teaching Assistant in Pattern Recognition Fall 2011, Fall 2012  
Teaching Assistant in Programming Languages Fall 2009  
Teaching Assistant in Advanced programming Spring 2008

## CERTIFICATES AND AWARDS

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1. ICML 2018 student travel award, Stockholm, July 2018.
2. Google inside look certificate, Zurich, September 2016.
3. Certificate for attending the Machine Learning summer school, Reykjavik, Iceland, May 2014.
4. PhD scholarship recipient from University of Waterloo, Canada, August 2013.
5. PhD scholarship recipient from Technical University of Darmstadt, Germany, April 2013.
6. Statement of accomplishment for online Machine Learning Course (advanced track), Stanford University, December 2011.
7. Exceptional talent certificate and admission award for master program without participating in nationwide university entrance exam, University of Tehran, Iran, September 2010.
9. Ranked top 0.07% nationwide matriculation exam - 348<sup>th</sup> among 500,000, September 2006.

## PROFESSIONAL ACTIVITIES AND SERVICES

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### Technical Program Committee:

1. European Conference on Machine Learning, ECML 2019.
2. Workshop on German Machine Learning and Data Mining, LWDA 2019.

### Peer Reviewing:

1. International Conference on Learning Representations, ICLR 2019.
2. Neural Information Processing Systems, NIPS 2018, 2017, 2016, 2015, and 2014.
3. International Conference on Knowledge Discovery and Data Mining, KDD 2018, 2017, 2016, and 2014.
4. International Joint Conferences on Artificial Intelligence, IJCAI 2018 and 2015.
5. International Symposium on Intelligent Data Analysis, IDA 2018.
6. German Conference on Artificial Intelligence, KI 2018.
7. European Conference on Machine Learning, ECML 2017, 2016, and 2014.

8. International Conference on Machine Learning, ICML 2016.
9. Conference on Computational Natural Language Learning, CoNLL 2015.
10. International Conference on Web Search and Data Mining, WSDM 2014.

**Membership:**

Association for Computing Machinery (ACM)

**Mentorship Experience:**

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|---|---------------------------|
| 1. Ekaterina Dolgovykh, graduate student    | Winter 2018               |
| 2. Akath Singh Dua, undergraduate student   | Summer 2016               |
| 3. Radhika Gaonkar, undergraduate student   | Summer 2015 – Summer 2016 |
| 4. Divya Venugopalan, undergraduate student | Summer 2014               |
| 5. Qifeng Hu, undergraduate student         | Summer 2014               |
| 6. Mario Herdt, graduate student            | Winter 2013               |

**TECHNICAL SKILLS**

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<b>Programming languages</b>	Python, C/C++, Java, C#, MATLAB
<b>Tools</b>	Tensorflow, OpenCV, mySQL, LaTeX, Git

**LANGUAGES**

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<b>Persian</b>	Native
<b>English</b>	Full professional proficiency
<b>German</b>	Average Level (A2)

**REFERENCES**

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<b>Prof. Ulf Brefeld</b>	Leuphana University of Lüneburg brefeld@leuphana.de
<b>Prof. Johannes Fürnkranz:</b>	Technical University of Darmstadt juffi@ke.informatik.tu-darmstadt.de
<b>Dr. Uwe Dick</b>	Leuphana University of Lüneburg uwe.dick@leuphana.de