

# Hamed MAHDAVI

## PERSONAL DATA

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## RESEARCH INTERESTS

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- Probabilistic Machine Learning
- Approximate Inference
- Point Processes
- Optimization in Machine Learning
- Generative Modeling
- Fairness and Interpretability in Machine Learning
- Statistical Learning Theory
- Reinforcement Learning

## EDUCATION

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CURRENT Master of Science in COMPUTER ENGINEERING,  
SEP 2017 **Sharif University of Technology**, Tehran, Iran  
Major: Artificial Intelligence  
Thesis: Dynamic Scalable Network Inference | Supervisor: Prof. Hamid Beygi  
GPA: 18.45/20  
SEP 2012 Bachelor of Science in COMPUTER ENGINEERING,  
**Sharif University of Technology**, Tehran, Iran  
Major: Software Engineering  
Thesis: "A Survey On Speech Enhancement Algorithms"  
Supervisor: Prof.Hossein Sameti  
GPA: 15.7/20  
JULY 2011 Mathematical Olympiad Summer Set,  
**Young Scholars Club**

## WORK AND RESEARCH EXPERIENCE

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FEB 2019-NOW	<b>Research Collaborator at SCALABLE NETWORK INFERENCE ON MDND PROJECT</b> MDND (Mixture of Dirichlet Network Distributions ) is a Bayesian non-parametric model for simultaneous learning and clustering of a social network graph. Learning and Inference have always been challenging in in this class of models. In this project, I worked under supervision of Stefanie Jegelka, Baharan Mirzasoleiman and Mahmoudreza Babaei to overcome this problem from a new perspective, specifically applied on MDND model.
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AUG 2018-JAN 2019	<b>Research Intern at MAX PLANCK INSTITUTE, Saarbrücken, Germany</b> The Max Planck Institute for Software Systems (MPI-SWS) is a computer science research institute co-located in Saarbrücken and Kaiserslautern. In my six months internship period, we worked on theoretical aspects of reinforcement learning under supervision of Dr. Adish Singla. Our main work was on multi-agent reinforcement learning, adversarial attacks and human-centered reinforcement learning. In each topic, we tried to model the topic as a theoretical framework in discrete MDP's
JUL-SEP 2017	<b>Summer Intern at FARAGOSTAR, Tehran</b> Faragostar is a leading developer of office automation applications and financial management software in Iran.
OCT 2012-APR 2013	<b>Mathematical Olympiad Teacher at ALLAMEH HELLI HIGHSCHOOL, Tehran</b> Allameh Helli is an outstanding talent school in Iran and I was a mathematical olympiad courses teacher for Number theory.

## HONORS AND AWARDS

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- JUNE 2017    Ranked 5th in the Artificial Intelligence field, 2nd in the Networks and Security field and 4th in the IT field of nationwide MSc entrance exam
- JUNE 2012    Ranked 217th in Iran National Universities Entrance Exam among 300K+ students
- SEPT. 2011    Silver Medal, in 29th Iranian National Mathematical Olympiad

## TEACHING ASSISTANCE EXPERIENCE

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- SPRING 2019    Convex Optimization (Prof. Jafari)  
Sharif University of Technology, Tehran, Iran
- SPRING 2019    Engineering Probability and Statistics (Prof. Jafari)  
Sharif University of Technology, Tehran, Iran
- SPRING 2018    Signals and Systems (Prof. Sameti)  
Sharif University of Technology, Tehran, Iran
- SPRING 2015    Design and Analysis of Algorithms (Prof. Ghodsi)  
Sharif University of Technology, Tehran, Iran

## RELATED COURSES

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- GRADUATE:    Stochastic Processes (18.8/20), Speech Processing (18/20), Algorithmic Game Theory (17.9/20), Statistical Learning Theory (18.5/20), Probabilistic Graphical Models (17.7/20), Computational Geometry (18/20), Advanced Statistical Machine Learning (19.3/20), Convex Optimization (19/20)
- UNDERGRADUATE:    Design and Analysis of Algorithms (19.5/20), Signal Processing (18/20), Probability and Statistics (16/20), Data Structures and Algorithms (19.1/20), Discrete Structures (20/20)

## COMPUTER SKILLS

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Programming : Java, Scala, Python, C#, Matlab, R  
Web : HTML, CSS, JavaScript, Django, Play Framework, AngularJs, Bootstrap  
Tools : NumPy, Scikit-Learn, PyTorch, Elasticsearch  
DB : PostgreSQL, MongoDB  
OS : Windows, Ubuntu  
Version Control : Git  
Word Processor :  $\text{\LaTeX}$ , Microsoft Word

## LANGUAGES

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PERSIAN: Mothertongue  
ENGLISH: Fluent

## REFERENCES

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Baharan Mirzasoleiman	Post doctoral fellow at Stanford
Adish Singla	Faculty at Max Planck Institute for Software Systems
Hamid Beigy	Associate Professor at Sharif University of Technology
Mahdi Jafari Siavoshani	Assistant Professor at Sharif University of Technology

## INTERESTS AND ACTIVITIES

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Guitar, Badminton, Melodica, Reading Books, Movies, Philosophy