#### Bahram Behzadian

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Research Interests Reinforcement learning, machine learning, robotics.

**Education** University of New Hampshire

Ph.D. candidate in Computer Science, 2019-Present

Advisor: Marek Petrik

University of New Hampshire

MSc. in Computer Science, 2015-2019

2015-Present

2012 - 2014

Master's thesis: Feature Selection by Singular Value Decomposition for Reinforcement Learning

Thesis advisor: Marek Petrik

TAMPERE UNIVERSITY OF TECHNOLOGY, FINLAND MSc. in Machine Automation, 2010-2013

Master's thesis: Robot Localization with Weak Maps

Thesis advisor: Wolfram Burgard

AZAD UNIVERSITY OF MASHHAD, IRAN

BSc. in Mechanical Engineering, 2002-2007

Final project: HVAC design for 16,000 sq. ft cold storage warehouse

### Research Experience

REINFORCEMENT LEARNING AND ROBUSTNESS LAB

Research Assistant
University of New Hampshire, Durham, NH, USA

Projects: Optimizing the ambiguity sets for robust Markov decision processes, efficient algorithms for S-rectangular robust MDPs, and feature construction from high-dimensional raw-input observation for linear

value function approximation for reinforcement learning.

AUTONOMOUS INTELLIGENT SYSTEMS LAB

Research Assistant

University of Freiburg, Freiburg, Germany

Project: Mobile robot localization and navigation on hand-drawn maps.

### Refereed Conference Publications

- B. Behzadian, R. H. Russel, M. Petrik, C. P. Ho. "Optimizing Percentile Criterion using Robust MDPs" In *The International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2021.
- B. Behzadian, S. Gharatappeh, M. Petrik. "Fast Feature Selection for Linear Value Function Approximation" In *International Conference on Automated Planning and Scheduling, (ICAPS)*, 2019.
- B. Behzadian, P. Agarwal, W. Burgard, and G. D. Tipaldi. "Monte Carlo localization in hand-drawn maps" In *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2015.
- F. Boniardi, B. Behzadian, W. Burgard, and G. D. Tipaldi. "Robot navigation in hand-drawn sketched maps." In *Proc. of the IEEE European Conference on Mobile Robotics (ECMR)*, 2015.

# Symposiums & Workshops

R. H. Russel, B. Behzadian, M. Petrik. "Optimizing Norm-bounded Weighted Ambiguity Sets for Robust MDPs" In 33rd Conference on Neural Information Processing Systems (NeurIPS) Safety and Robustness in Decision-making Workshop, 2019.

B. Behzadian, M. Petrik. "Feature Selection by Singular Value Decomposition for Reinforcement Learning" In International Conference on Machine Learning (ICML) Prediction and Generative Modeling Workshop, 2018.

B. Behzadian, M. Petrik. "Low-rank Feature Selection for Reinforcement Learning" In *International Symposium on Artificial Intelligence and Mathematics*, (ISAIM), 2018.

#### Additional Employment

ENVIO, INC.

AI Engineer Intern

Summer 2018

Dover, NH, USA

Worked on solving a vehicle routing problem designed for intermodal trucking

PERGAS POLYMER CO.

PLC Programmer / Automation Engineer

2008-2009

Tehran, Iran

Provided technical support in the troubleshooting of electrical and PLC control systems and machinery

TADBIR SANAT CONSULTING ENGINEERS

HVAC System Designer

2007-2008

Tehran, Iran

Performed calculations in mechanical systems design, selection, sizing of equipment, and interconnected HVAC, hydronic, steam, and plumbing systems

# Teaching Experience

University of New Hampshire

From Programs to Computer Science

Teaching Assistant

Intro to Computer Science I
Intro to Computer Science II
From Problems to Algorithms to Programs

Fall 2016, Spring 2018 Spring 2018

Fall 2017

Spring and Fall 2017

## Scholarships

CEPS Graduate Fellowship

2015

/Awards College

College of Engineering and Physical Sciences, University of New Hampshire

A prestigious award that is based on the strength of academic record and the potential for success in graduate school.

Thesis and Dissertation Fellowship

2012

Office of International Affairs, Tampere University of Technology

Technical

Programming Languages: Python; C/C++; R; Matlab.

Skills Tools: Git; LATEX; Linux; TLA+.