Ehsan Imani

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ehsanei.github.io

EDUCATION

University of Alberta

- PhD in Computing Science   Sep 2021 – 2024 (Expected)
  - Adviser: Martha White
  - Relevant Courses: Reinforcement Learning Theory (Csaba Szepesvári), Machine Learning Theory (Csaba Szepesvári)
- MSc in Computing Science   Sep 2017 – Feb 2019
  - Adviser: Martha White
  - Thesis: Distributional Losses for Regression [Outstanding Thesis Award Runner-Up]
  - Relevant courses: Reinforcement Learning (Richard Sutton and Adam White), Machine Learning (Martha White), Optimization in Reinforcement Learning (Martha White)

Sharif University of Technology

- BSc in Software Engineering   Sep 2011 – Sep 2016
  - Adviser: Mahdieh Soleymani Baghshah
  - Thesis: Distance Metric Learning for Multi-Modal Data: A deep approach

RESEARCH EXPERIENCE

Research Assistant at RLAI Lab, **University of Alberta**   Nov 2017 – Present
- Supervisor: Martha White

Researcher at Noah's Ark Lab, **Huawei**   May 2021 – Sep 2022
- Supervisor: Jun Luo, Pascal Poupart

Research Assistant at ML Lab, **Sharif University of Technology**   Jul 2014 – Sep 2016
- Supervisor: Mahdieh Soleymani Baghshah

PUBLICATIONS

The Tunnel Effect: Building Data Representations in Deep Neural Networks. Wojciech Masarczyk, Mateusz Ostaszewski, Ehsan Imani, Razvan Pascanu, Piotr Miłoś, Tomasz Trzciński. *NeurIPS*, 2023.

Off-Policy Actor-Critic with Emphatic Weightings. Eric Graves, Ehsan Imani, Raksha Kumaraswamy, Martha White. *JMLR*, 2023.

Representation Alignment in Neural Networks. Ehsan Imani, Wei Hu, Martha White. *TMLR*, 2022 and *CoLLAs*, 2023.

An Implicit Function Learning Approach for Parametric Modal Regression. Yangchen Pan, Ehsan Imani, Amir-massoud Farahmand, Martha White. *NeurIPS*, 2020.

An Off-policy Policy Gradient Theorem Using Emphatic Weightings. Ehsan Imani, Eric Graves, Martha White. *NeurIPS*, 2018.

Improving Regression Performance with Distributional Losses. Ehsan Imani, Martha White. *ICML*, 2018.

Multi-Modal Deep Distance Metric Learning. Seyed Mahdi Roostaiyan, Ehsan Imani, Mahdieh Soleymani Baghshah, *Intelligent Data Analysis*, 2017.

PREPRINTS	**Label Alignment Regularization for Distribution Shift** . <u>Ehsan Imani</u>, Guojun Zhang, Jun Luo, Pascal Poupart, Yangchen Pan. *arXiv*, 2022.
	Hallucinating Value: A Pitfall of Dyna-style Planning with Imperfect Environment Models. Taher Jafferjee, <u>Ehsan Imani</u>, Erin Talvitie, Martha White, Michael Bowling. *arXiv*, 2020.

ACADEMIC SERVICE

Reviewer

- NeurIPS   2019, 2020, 2021, 2022, 2023
- ICML   2021
- ICLR   2020, 2021, 2023, 2024
- AAAI   2019, 2020
- TMLR, TPAMI, Artificial Intelligence

Mentor

- Kai Luedemann, Sam Scholnick-Hughes (BSc at University of Alberta)   2023

AWARDS & HONORS

NeurIPS Top Reviewer	2023
PhD Recruitment Award, University of Alberta	2021
Master's Early Achievement Award, University of Alberta	2018
Travel Award for Machine Learning Summer School, Kyoto University	2015

TEACHING EXPERIENCE

Reinforcement Learning Specialization, Coursera (+80k Learners)

- Subject Matter Expert under Adam White and Martha White   2019

Machine Learning, University of Alberta

- Teaching Assistant under Lili Mou   2023
- Teaching Assistant under Martha White   2021

Artificial Intelligence, Sharif University of Technology

- Teaching Assistant under Mahdieh Soleymani Baghshah   2015

INDUSTRIAL EXPERIENCE

Internship at VADA

- Project: Computer vision for intelligent marketing   Mar 2016 – May 2016

CODE SAMPLES

gym-puddle, Puddle world environment for OpenAI Gym.

pytorch-rl, An RL agent with PyTorch.

jax-transformer, Seq2Seq Transformer in JAX.