





MARYAM HONARI

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EXPERIENCE

Machine Learning Engineer | Unity Technologies, Vancouver, BC Feb 2021 - Present

- Develop Machine learning tools to train intelligent agents in games and simulated environments
- Maintain PyTorch open-source [ML-agents](#) package, implement SOTA RL algorithms
- Focused on performance improvements for distributed rendering and training

Machine Learning Engineer | Kabam Games, Vancouver, BC May 2019 - Jan 2021

- Train reinforcement learning agents for play-testing and game balancing
- Design and development of game agnostic reinforcement learning platform

Data Scientist Intern | Synopsys Software, Vancouver, BC Sep 2017 - Dec 2017

- Improved and deployed the accuracy of a legal agreement classifier by 10% ,retrieve the risky information with TF-IDF and word2vec features

Research Collaborator | [Neurolinguistics Lab, NYU](#), Sep. 2018 - March. 2019

- Investigate correlation of computational Semantic representation with brain neural activity during language composition and production tasks. Tools: skipgram, MNE-python, signal processing

Computer Vision Researcher Intern | [CIVIP Lab](#), Shiraz University, Iran Jun. 2015 - Nov. 2015
Advised by Dr. Zohreh Azimifar

- Contributed to design and implementation of Vehicle Speed Estimation system;
- Tuned License Plate Recognition System (LRP) in the day and night conditions

EDUCATION

University of Victoria *Victoria, Canada*
M.Sc. Computer Science, **Supervisor:** Dr. Alona Fyshe Overall GPA: 4.22/4.33
Research: Machine learning, Natural Language processing *Sep. 2016 - Apr.2019*

Shiraz University *Shiraz, Iran*
B.Sc. Computer Engineering (Software Engineering) Overall GPA: 18.06/20.0
Ranked 4th among 100 CE students *Sep. 2012 - Jul. 2016*

PUBLICATIONS

Neural representation of words within phrases: Temporal evolution of color-adjectives and object-nouns during simple composition [\[PDF\]](#) [\[code\]](#)

Honari, M., Chouinard, Blanco-Elorrieta, Pytkknen, Fyshe, PLOS ONE Journal, 2021

Decoding semantic representations during production of minimal adjective-noun phrases

Master's Thesis, 2019 (Computer Science, University of Victoria) [\[PDF\]](#)

Ensemble Methods for Native Language Identification [\[PDF\]](#)

Honari, M., Chan, Benetti, Lakhani, Fyshe, EMNLP17 BEA workshop , 2017

RELATED PROJECTS

[Convolutional Neural Networks for Facial Expression Recognition](#)

- Developed an online application to predict emotions in real-time

- Explored three neural network architectures and achieved accuracy of 68.2% on FER2013 dataset
Tools: Keras, Tensorflow, OpenCV, python

Oscars' Winners and Nominees prediction

- Explored impact of social profile of a movie on nomination or winning of an academy award
- Achieved 64% accuracy on nominees and 41% accuracy on winners of last 50 academy awards
Tools: python, scikit-learn, Pandas, numpy, matplotlib

Facial Recognition system

- Built an online application to dynamically recognize faces in videos
- Performance of Eigen faces, Fisher faces, LBPH and KNN were compared on variety of datasets
Tools: C++, OpenCV

Parallel Graph Algorithms on GPU

- Developed *BFS*, *Floyd-Warshall* and *graph colouring* algorithms on CUDA platform
- 90x speed up in Floyd-Warshall for a graph of 2k nodes **Tools:** CUDA, C++

Correlation Between Transportation Expansion and Socioeconomic Effects

- Developed a Tableau visualization to represent how transportation system expansion correlated the socio-economic indices like income and house affordability, in London, UK in recent years
Tools: Tableau, python, panadas

TEACHING ASSISTANT

Algorithms and Data Structures

University of Victoria

Design and Analysis of Algorithms

Shiraz University

Data Structures & Algorithms

Shiraz University

TECHNICAL SKILLS

Programming Languages	• C/C++	• Java	• C#	• Python	• MATLAB
	• SQL	• PHP	• Javascript	• CSS	• HTML
platforms & Frameworks	• Pytorch		• Tensorflow2	• OpenCV	• CUDA
	• Docker & Kubernetes		• AWS & GCP	• Flask	
	• Unity		• Tableau	• LaTeX	• Git

HONORS AND AWARDS

Grace Hopper Celebration Speaker, Enabling Cooperative Behaviors in Multiplayer Games Using Deep Reinforcement Learning *Sep, 2021*

Placed 2nd at the [Native Language Identification \(NLI\) Challenge](#) at EMNLP Conference *Sep, 2017*

Volunteer mentor at Science Venture workshop *Aug. 2017*

Department **Fellowship** and **RA** position from **University of Victoria** *Sep. 2016*

Prospective department **Fellowship** and **RA** position from **University of Alberta** *Sep. 2016*

Ranked 12th among 155 teams in [AI Challenge](#) *Feb. 2015*

A multi-agent survival challenge held by *Sharif University of Technology*

Honorable mention in the regional ACM-ICPC, Tehran, Iran *Dec. 2013*

Semi-finalist in **Iranian National Olympiads in Math and Informatics** *2010 & 2011*