

Ahmad Pourihosseini

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EXPERIENCE

Software Engineer

Mar. 2023 – Present

BlueCat - Toronto, ON, Canada

- Developing and enhancing backend features in the company's core DDI (DNS, DHCP, IP Management) product, written in Java & C++.
- Actively contributing to the internal tooling, including pitching the idea for and implementing a productivity-enhancing tool using Groovy and web technologies to optimize a frequently used workflow, receiving positive feedback across the company.

Machine Learning & NLP Research Intern

May 2022 – Mar. 2023

Samsung AI Centre - Toronto, ON, Canada

- Implemented and optimized advanced NLP algorithms, improving the state-of-the-art fine-grained dependency parser in the cooking domain, in a collaborative effort that resulted in a 7.8 edge prediction F1 score increase, using HuggingFace and AllenNLP.
- Utilized data visualization tools to analyze complex relationships in data and find common error patterns in model predictions.

Machine Learning Research Assistant

Feb. 2019 – Feb. 2020

Machine Learning and Computational Modeling Lab at the University of Tehran - Tehran, Iran

- Developed algorithms to enhance the output diversity of an adversarial perturbation generator for better adversarial training.

Machine Learning Engineer

Jun. 2019 – Sep. 2019

Sensifai - Tehran, Iran

- Optimized object detection algorithms for real-time analysis on an edge computing device (Coral Dev Board), using TensorFlow.

Backend Web Developer

Jun. 2017 – Sep. 2017

Boghche - Tehran, Iran

- Developed a Telegram bot using the MERN stack to receive customer orders, outperforming the native apps in customer engagement.

EDUCATION

MSc in Applied Computing [GPA 4.0]

Sep. 2021 – Jun. 2023

University of Toronto, Department of Computer Science

- Specialized in natural language processing, with two courses on the subject and two in general machine learning.
- Conducted applied research at Samsung AI on flow graph parsing in the cooking domain.

BSc in Computer Software Engineering [GPA 3.97]

Sep. 2015 – Feb. 2020

University of Tehran, Department of Software Engineering

- Ranked **1st** among all 110 computer engineering students.
- Rigorous coursework in data structures and algorithms as part of the core curriculum.

TECHNICAL SKILLS

- Web development technologies: HTML, CSS, Node.js, React, MongoDB, SQL, REST APIs
- Programming Languages: Python, JavaScript, Typescript, Java, C/C++, Groovy
- Machine Learning Libraries: PyTorch, Scikit-learn, HuggingFace, NumPy, Pandas, Matplotlib, Tensorflow, NLTK
- DevOps & Build Tools: Jenkins, Gradle, Maven

PERSONAL PROJECTS

SuperMario - Advanced Programming

Winter 2020

A minimal C++ implementation of the famous SuperMario game, using SDL2 ([repository](#)).

Real Estate Marketplace Web Application - Internet Engineering

Winter 2018

A full-fledged web application for real estate rental and sale using Java, React, and MySQL.

Atalk - Compiler Design and Implementation

Fall 2017

A compiler for an actor-based programming language, with MIPS as its target instruction set, written in Java and Antlr4.

Automatic Library of Congress Classification - Introduction to Machine Learning

Fall 2021

Collaborated with a team of three to apply advanced ML techniques like word embeddings and sequential models to enhance Library of Congress record classification performance by leveraging previously unused data ([repository](#)).

AWARDS AND HONORS

- Vector Scholarship in Artificial Intelligence, Vector Institute, \$17,500 May 2021
- Faculty of Engineering Award (FOE), University of Tehran 2016, 2017, 2018
- Ranked Top 0.3% in the Nationwide University Entrance Exam among 167,000 participants Jul. 2015