YASMIN NIKNAM

AI Researcher & Engineer

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TEACHING AND WORK EXPERIENCE

Internship
Mitacs

📅 November 2021 – May 2022   📍 London, ON

- Led to building a deep learning model capable of solving a real-world problem.
- Gained experience working with real-world image data.

Internship
HARA AI

📅 May 2019 – September 2019   📍 Tehran, Iran

- Led to building a model retrieving Persian music and songs from various authors.
- Gained experience working with real-world audio data.

Teaching Assistant
University of Western Ontario

📅 September 2021 – Present   📍 London, ON

- Holding lab sessions, grading assignments, proctoring and grading exams for courses Computer Science Fundamentals I and II.

Teaching Assistant
University of Tehran

📅 September 2018 – January 2021   📍 Tehran, Iran

- Designing assignments, exams, and projects, grading exams, holding lab sessions, and managing classes in various courses namely Digital Logic Design, Linear Control Systems, Computer Programming, Digital Signal Processing, Engineering Mathematics, Engineering Probability and Statistics, Communication Systems, and Intelligent Systems.

ACADEMIC RESEARCH EXPERIENCE

Source-free Domain Adaptation for Sleep Staging

- Designing and implementing a model capable of learning from a source domain and then perform well on a second domain called target domain, without accessing the source domain during training the target domain.

Time-Series Data   Imbalanced Data   Unsupervised Learning

Video-Text Retreival for Real-World Video Data

- Understanding the semantics of multiple events in untrimmed news videos from Thomson Reuters and matching them with their corresponding relevant captions. (in collaboration with Vector Institute)

Real-World Data   Representation Learning

TECHNICHAL SKILLS

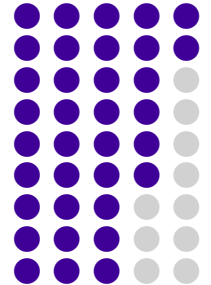**Java, C/C++, OOP**
Python, MATLAB
Pytorch, TF, Keras
OpenCV, Scikit-learn
Weights and Biases
Git, Shell Scripting
Docker
Elasticsearch, MongoDB
HTML, CSS, Bootstrap, JS

EDUCATION

M.S. in Computer Science
University of Western Ontario

📅 2021 – Present

GPA: 4/4

B.S. in Electrical Engineering
University of Tehran

📅 2016 – 2021

GPA: 18.25/20

Minor Degree in Computer Engineering
University of Tehran

📅 2018 – 2021

GPA: 18.43/20

HONOR AND AWARDS

- Received Mitacs Accelerate Fellowship of 15K CAD
- Received the University of Tehran M.Sc. Fellowship Award (exempted from the graduate entrance exam)
- Received Best Undergraduate Thesis Award from the University of Tehran
- Ranked 8th (among top 10 percent) out of 120 undergraduate students, School of Electrical and Computer Engineering, University of Tehran
- Ranked 111th among more than 200,000 participants in Iranian National University Entrance Exam in 2016
- Member of Iran's National Elites Foundation

Vehicle Instance Localization and Counting

- Designing a model capable of localizing and counting vehicles in an image taken from a drone and annotating real-world data for the project using Amazon Mechanical Turk tool)

Real-World Data   Amazon Mechanical Turk

Cross-Modal Generation

- Generating corresponding audio of a video using for a variety of categories state-of-the-art deep learning models and transformers.

Cross-Modal Representation Learning   Pytorch   Generative Models
OpenCV

Image and Video Restoration

- Restoring old photos that suffer from severe degradation through training two variational autoencoders (VAEs) to respectively transform old photos and clean photos into two latent spaces.

Jupyter Notebook   Scikit-learn   Pytorch

Multiple Object Tracking

- Tracking people in crowded scenes by exploiting the bounding box regression of an object detector to predict the position of an object in the next frame, thereby converting a detector to a tracktor.

Pytorch   Image Segmentation   OpenCV

Dialogue Generation

- Implementing RNN, LSTM, and GRU Models to generate text files and conversations.

Keras   Natural Language Processing

Price Estimation

- Implementing a Regression Model to estimate cellphone prices based on customers' data.

Real-World Data   Language Data Preprocessing   Scikit-learn

AP Drive

- Implementing a web platform called "AP Drive" which allows users to manage their files. The AP HTTP have been used for implementation of the platform's back-end via C++ coding.

C++ Object Oriented   HTML   CSS   Bootstrap   JavaScript

SELECTED COURSES

- Advanced Artificial Intelligence
- Artificial Intelligence
- Engineering Probability and Statistics
- Neural Networks
- Brain Inspired AI
- Advanced Programming
- Design Algorithm
- Data Structure and Algorithm
- Unstructured Data
- Digital Signal Processing
- Linear Algebra
- Operating Systems
- AI Ethics

EXTRACURRICULAR ACTIVITIES

Musical Studies

📅 2010 – Present

Focusing on a classical piano repertoire for over 10 years

Tedx Keshavarz Boulevard

📅 May 2017

Working as a member of partnership in Tedx Keshavarz Boulevard.