Negar Mirgati

@ mirgati@ualberta.ca | LinkedIn | GitHub | StackOverflow | Portfolio | Edmonton, Canada

Research Interests

• *Machine Learning* • *Deep Learning* • *Game AI* • *Procedural Content Generation in Games*

Education

University of Alberta — Edmonton, Canada
M.Sc. in Computing Science; ***GPA: 4.00/4.00*** — *Sep 2021 – Sep 2024 (Expected)*

University of Tehran — Tehran, Iran
B.Sc in Computer Hardware Engineering; ***GPA(last two years): 3.84/4*** — *Sep 2015 – Feb 2020*

Research Experience

Graduate Researcher at University of Alberta — Edmonton, Canada
Apr 2022 – Present

- Working on procedural generation of new levels for platformer-based games using gameplay video. The main purpose of this research is to propose a new method of generating levels for unseen games without annotated datasets - Under the supervision of Prof. Matthew Guzdial

Undergraduate Researcher at University of Tehran — Tehran, Iran
Jun 2019 – Aug 2019

- Worked on predicting award-winner books on the Goodreads website using various machine learning techniques. For this project, a tabular dataset was created by crawling book information from the Goodreads Website - Under the supervision of Prof. Behnam Bahrak

Work Experience

Summer Intern at Institute for Research in Fundamental Sciences (IPM) — Tehran Iran
Jul 2018 – Oct 2018

- Worked on implementation of the genetic, memetic, artificial bee colony, simulated annealing, and firefly algorithms for the problem of server placement optimization.

Backend Developer at SynApps — Tehran, Iran
Mar 2020 – Oct 2020

- Worked as a Django Backend Developer on the clinic management application project. The application offers features for organizing crowded patient queues, submitting medical history, lab tests, and radiology reports of the patients.

Notable Projects

Server Placement Optimization | *GitHub*

- Implementation of nature-based algorithms for the problem of server placement optimization (Implemented in Python) - Summer internship project @ IPM

MAPVis | *GitHub*

- A web-based interface used for visualizing the Maximum A-posteriori Estimation (MAP) in data communication (Implemented using Javsascript and HTML/CSS)
- The purpose of developing this tool was to help the data communication course students understand the aforementioned concept. (A TAship task for the data communication course @ UT)

Light-Seeking Arduino Robot | *GitHub*

- Main project of the course Real-Time and Embedded Systems at University of Tehran
- Design and development of a robot that simulates a smart moving plant pot, which automatically seeks and moves to lighter places and waters the plant if necessary (Implemented using Arduino .ino (C++))

Teaching Experience

CMPUT174 (Lead Student Instructor) Fall 2022 - University of Alberta

CMPUT175 Winter 2022 - University of Alberta

CMPUT174 Fall 2021 - University of Alberta

Network Security Spring 2021, Fall 2020 - University of Tehran

Data Communications Fall 2020 - University of Tehran

Engineering Probability and Statistics Fall 2017 - University of Tehran

Technical Skills

Programming: Python, Java, C++, R

Technologies: Git, Arduino, Quartus, Xilinx ISE, Hspice

Frameworks: Django, React

ML Frameworks: Tensorflow, Keras, Scikit-learn

Language Skills

English: Fluent

- TOEFL ibt (Nov 2020) : 110/120

Persian: Native

French: Elementary

Relevant Coursework

University of Alberta: Intro to Machine Learning (A+), Intro to NLP (A), Approximation Algorithms (A), Knowledge Graphs (A+)

University of Tehran (Selective): Data Communications (19.5/20), Algorithms Design (19.4/20), Engineering Mathematics (19.5/20), Introduction to Wireless Networks (18.6), Linear Control Systems (18.5/20), Algorithmic Graph Theory (17.8/20)

Online Coursework: Neural Networks and Deep Leaning (DeepLearning.ai), Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning (DeepLeaning.ai), Convolutional Neural Networks in Tensorflow (DeepLearning.ai)