Mohammad Amin Roohi

MASc Student

Personal Data

Address: 2225, Acadia Road, Vancouver, Canada
Phone: +1 236 979 9944
email: m5a0r7@gmail.com

Education

Since 2020 — Master of Applied Science, Electrical and Computer Engineering,
University of British Columbia, Vancouver, Canada.

2014-2019 — Bachelor of Science, Dual majors at Electrical Engineering and Computer Science,
Sharif University of Technology, Tehran, Iran.

Some relative courses

Research Expriments

Since Sep 2020

Research Thesis at UBC
Safe Optimization

We are trying to address an optimization problem with unknown constraints. Safety means we have to satisfy the unknown constraints all the way to the final choice. I'm working on developing these algorithms and applying these algorithms in a practical application where we are utilizing safe optimization techniques in manufacturing to increase the quality of products. We have some input variables and need to find the best setup, such that we always have an acceptable product and avoid failed products.

Supervisor: Dr. Maryam Kamgarpour

July 2018-May 2019

Bachelor Thesis at Sharif University of Technology
Fatigue Detection using EEG Signals

Mental fatigue detection using time series. We used Machine Learning algorithms, derived some statistics with the help of Brain Connectivity knowledge and Signal Processing Concepts during this project.

Supervisor: Dr. Hoda Mohammadzade

June 2018-Feb 2019

HPC Lab at IPM *(Institute for Research in Fundamental Sciences)*
Working on Machine Learning algorithms and BCI projects

Seizure predicting using EEG signals, utilizing various Machine Learning and Statistical Signal Processing techniques on epileptic EEG for diagnostic applications.

Supervisors: Dr. Dara Rahmati & Dr. Saeid Gorgin

Work Exprience

Dec/2019 - Jan 2020

Rahpa Company

Working as a Data Scientist and Backend Developer. Defining and Optimizing different metrics to observe and control behaviour of drivers, trying to select next cargo efficiently.

Summer 2016

YSC *(Young Scholars Club)*

Holding Geometry part of Mathematical Olympiad, Designing questions, Grading exams in the 3 nd -final- round of IRAN national Mathematical Olympiad.

2014-2019

Prominent Iran High schools
Preparing Students for Mathematics Olympiad

Teaching different concepts of Mathematical Olympiad, Designing questions and Exams in Different mathematics Contest

Teaching Assistant

Course	Situation	professor
Introduction to Data Science	Tutorial Class, Lab assistant, Grader	groups of profs
Machine Learning & Computer Vision Lab	Tutorial Class, Lab assistant, Grader	Dr. Mohammadzade
Engineering Probability & Statistics	Tutorial Class, Exams Designer, Grader	Dr. Sharifi-Zarchi
Introduction to programming	Piazza answering, Grader	groups of profs

Some Relative Courses

Course	professor
Advanced Machine Learning	Dr. Mark schmidt
Machine Learning	Dr. Lutz Lampe
Optimization Theory	Dr. Michael P. Friedlander
Computational Optimization & Computer Vision Lab	Dr. Babhru Joshi
Advanced Algorithm Design	Dr. Bruce Shepherd
Game Theory	Dr. Maryam Kamgarpour
Machine Learning & Computer Vision Lab	Dr. Mohammadzade
Introduction to Machine Learning	Dr. Saleh
Data Analysis	Dr. Mirsadeghi & Dr. Ehyaei
Python Programming	Dr. Biglari
Linear Algebra	Dr. Akbari
Differential Equations	Dr. Kianpour
Discrete Mathematics	Dr. Jafari
Probability with Application	Dr. Esfahanizadeh
Statistics with Application	Dr. Mirsadeghi
Linear Programming	Dr. Alimi
Numeric Analysis 2	Dr. Bagherpoor
Graph Theory with Application	Dr. Akbari
Mathematics Analysis 1	Dr. Bahraini
Mathematics Logic	Dr. Ardeshir
Parallel Programming (Graduate course)	Dr. Hashemi
Data Networks (Graduate course)	Dr. Pakravan
Neural Networks (Graduate course)	Dr. Bagheri Shouraki

Computer Skills

Engineering Software:	Matlab, Autocad, Hspice, Altium Designer, Pspice, Quartus , Modelsim
Progamming Languages:	C/C++, Python, Java, R, Cuda, OpenCV, SageMath, HTML5, Django, Verilog HDL
Tools:	Excel, Word, PowerPoint, Microsoft Project, LaTeX