SEPIDEH KHAKZADGHARAMALEKI

✉ **Email:** SepidehKhakzad@gmail.com
📞 **Phone:** +1 438 509 9139
in **Linkedin:** sepideh.khakzadgharamaleki

EDUCATION

Ph.D. Electrical and Computer Engineering, Concordia University

📅 2021 – now   📍 Montreal, Canada

- **Focusing on** Deep learning in medical image analysis.

M.Sc., Electrical Engineering,Sharif University of Technology

📅 2019 – 2021   📍 Tehran, Iran

- **Cumulative GPA:** 16.61/20
- **M.Sc. Project Title:** Machine learning-based building climate control using weather forecast data.

  Selected Courses: Artificial Neural Networks (20/20), Machine Learning (18.5/20) Adaptive Control (16.8/20), Robust Control (16.4/20).

B.Sc., Electrical Engineering, K. N. Toosi University of Technology

📅 2014 – 2018   📍 Tehran, Iran

- **Cumulative GPA:** 17.21/20
- **B.Sc. Project Title:** Fault detection and identification of blade's pitch in wind turbines using C-NN.

  Selected Courses: Instrumentation (20/20), Modeling and Simulation (19.5/20), Modern Control (17.75/20), Fault detection and Identification (16/20).

RESEARCH INTERESTS

- Machine Learning Techniques
- Deep learning
- Control theory
- Fault detection and identification
- System identification
- Image processing

EXPERIENCE

Teaching Assistant

Sharif University of Technology

📅 Feb. 2021 – June 2021   📍 Tehran,Iran

- Linear Control lab course. Focusing on MATLAB and Simulink for simulating different LTI systems and control theory concepts.

Researcher

Fault Detection and Identification Lab, K.N. Toosi University of Technology

📅 Feb. 2018 – Sep. 2018   📍 Tehran,Iran

MOST PROUD OF

◈ **Positive Mentality**
Bringing out the best out of worst situations and making my way to success

💡 **Eager to learn new things**
Keeping me modernized and open to new Opportunities

👥 **Team worker and adaptive**
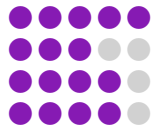Finding my proper role in group and trying to improve entire group quality

LANGUAGES

Persian	●●●●●
Turkish	●●●○○
Azeri	●●●○○
English	●●●●○

TOEFL Overall Score: 111

Reading:29/30 Listening:27/30

Speaking:28/30 Writing:27/30.

SKILLS

Matlab and Simulink	●●●●●
Python	●●●●○
C++	●●●○○
Altium designer	●●●○○
Comsol	●●○○○
Autocad	●●●○○
PLC Programming	●●●●○
Microsof Office	●●●●●
Prezi	●●●●●
LaTex	●●●●○

OTHER SKILLS

Pspice   Codevision   Proteus

Fluidsim   20sim

Siemens Simatic Manager Step 7

Version Control Systems (Git)

Python libraries: Tensorflow, Theano, PyTorch

OpenCV, Keras, Pandas

- Working on deep neural networks solutions for identifying faults in a wind turbine simulator.

Trainee
Arad Smarthome Corporates

📅 Summer 2017   📍 Tehran,Iran

- Installation and maintenance of home automation, home networking and home entertainment systems.

Researcher
ARAS Robotics Lab, K.N.Toosi University of Technology,

📅 JUNE 2015 – SEP. 2016   📍 Tehran,Iran

- member of the SSL (Small size League) Robotic Team called KN2C, designing and maintaining the electronic parts of the robots.

RELATED ACADEMIC PROJECTS

- Implementation of feedback controller and observer using Kalman filter on both analog and digital embedded systems
  Matlab and Simulink

- Pedestrian detection using HOG descriptors and SVM
  Python, OpenCV library

- Design, implementation and numerical analysis of a 2D MEMS optical switch
  COMSOL Multiphysics

- Analyzing complexity parameters of Lorenz System in Chua circuit
  Matlab

- Designing electrical boards for small-sized league robots
  Matlab, Altium designer, Pspice, Atmel Studio, Proteus

- Implementation of convoloutional and recurrent neural networks
  Python (Tensorflow and Theano)

- Modeling and control of a 6-DOF humaniod robot
  Matlab and Simulink

- A triple inverse pendulum robust control design
  Matlab and Simulink

- Trajectory-dependent direct adaptive control for a class of uncertain linear discrete-time systems
  Matlab and Simulink

- Multivariate linear regression from scratch
  Python

- Batch and stochastic Perceptron with pocket algorithm on handwritten MNIST dataset
  Python

AWARDS & HONORS

- 2021, Reciever of international tuition award of excellence at Concordia University.
- 2019, Ranked 31st in the nation-wide universities post graduate entrance exam.
- 2017 2018, Among top 5 of the students in control department.
- 2016, Ranked 5th in international RoboCup IranOpen 2016 Competitions, Small size League.
- 2015, Member of the English association of K.N.Toosi University of Technology participating in different activities such as holding free discussion classes in English.
- 2014, Top %0.8 among approximately 250,000 participants of the nation-wide universities entrance exam in the field of mathematics and physics.
- 2014, Ranked 91st in the nation-wide universities entrance exam among approximately 130,000 participants in the field of foreign languages (English).

PUBLICATIONS

- Journal Paper | S., KhakzadGharamaleki, A. Rezaeizadeh, "Machine learning-based building climate control using weather forecast data", Submitted.

REFERENCES

Dr. Amin Rezaei zadeh
@ aminre@sharif.ir
✉ Sharif University of Technology, Tehran, Iran
- Assistant Professor

Dr. Mahdi Aliyari Shouredeli
@ aliyari@kntu.ac.ir
✉ K. N. Toosi University of Technology, Tehran, Iran
- Assistant Professor

Dr. Maysam Zamani Pedram
@ maysam.pedram@yale.edu
✉ Yale University, New Haven, Connecticut, USA
@ mzpedram@kntu.ac.ir
✉ K. N. Toosi University of Technology, Tehran, Iran
- Assistant Professor

- Prababilistic Bayes and NaiveBayes classifier from scratch on heart disease dataset from Kaggle.com
  Python

- Logistic Regression with K-fold cross validation and L1 regularization from scratch on heart disease dataset from Kaggle.com
  Python

- Soft and hard-Margin SVM with cross validation from scratch on Human activity recognition dataset
  Python (CVXOPT)

- MLP implementation from scratch on Fashion MNIST dataset
  Python

- KNN on yeast data from scratch
  Python

- KNN with k-fold cross validation on yeast data from scratch
  Python

- Implementing random forest and adaboost from scratch
  Python

- PCA from scratch on MRI images and utilizing SVM for predicting Tumors
  Python

- K-means and K-means++ from scratch
  Python

- Using generative models (GMM) for clustering MNIST handwritten dataset
  Python

- implementing RL on actobot environment from gym library using Q-learning and SARSA from scratch
  Python