

# Mahdiyar Molahasani

PHD STUDENT · ELECTRICAL AND COMPUTER ENGINEERING

Queen's University, Kingston, Ontario, Canada

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## Education

### Queen's University

PHD ELECTRICAL AND COMPUTER ENGINEERING

- Advisor: Dr. Michael Greenspan and Dr. Ali Etemad
- Working on lifelong pedestrian behaviour understanding

Kingston, Ontario

May 2021 - present

### University of Saskatchewan

MS ELECTRICAL ENGINEERING

- Advisor: Dr. Seok-bum Ko
- GPA 91.3 (4/4)
- Thesis: "Deep Learning for Robust Super-Resolution"

Saskatoon, Saskatchewan

May 2019 - May 2021

## Honors and Awards

- |      |  |           |
|------|--|-----------|
| 2021 | <b>Devolved Scholarship</b> , Department of Electrical and Computer Engineering, USASK | \$ 16,000 |
| 2019 | <b>Best Poster Award</b> , 4th Annual P2IRC Symposium                                  |           |
| 2017 | <b>90<sup>th</sup> percentile</b> , School of Electrical Engineering, IUST             |           |
| 2013 | <b>Top 0.75%</b> , The Iranian nationwide university entrance exam                     |           |

## Selected Publications

For the full list of publications, see Google Scholar.

### JOURNAL

Haghanifar A, **Molahasani M**, Choi Y, Deivalakshmi S, Ko S. "Covid-cxnet: Detecting covid-19 in frontal chest x-ray images using deep learning." Multimedia Tools and Applications. 2022 (Accepted)

**Molahasani M**, Choi Y, Deivalakshmi S, Ko S. "Capsule GAN for prostate MRI super-resolution." Multimedia Tools and Applications. 2021 Nov 29:1-23.

**Molahasani M**, Ko SB. "Capsule GAN for robust face super resolution." Multimedia Tools and Applications. 2020 Nov; 79(41) : 31205-18.

### CONFERENCE

Zand M, Damirchi H, Farley A, **Molahasani M**, Greenspan M, Etemad A. "Multiscale Crowd Counting and Localization By Multitask Point Supervision." In International Conference on Acoustics, Speech, and Signal Processing (ICASSP). IEEE. (Accepted)

**Molahasani M**, Ko SB. "Msg-capsgan: Multi-scale gradient capsule gan for face super resolution." In International Conference on Electronics, Information, and Communication (ICEIC) 2020 Jan 19 (pp. 1-3). IEEE.

Haghanifar A, **Molahasani M**, Ko SB. "Automated teeth extraction from dental panoramic x-ray images using genetic algorithm." In IEEE International Symposium on Circuits and Systems (ISCAS) 2020 Oct 10 (pp. 1-5). IEEE.




Sharifi R, **Molahasani M**, Vakili VT. "Mobile user-activity prediction utilizing LSTM recurrent neural network." In IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (PACRIM) 2019 Aug 21 (pp. 1-7). IEEE.

## Professional Experience





2021-now **Graduate Research Assistant**, Department of ECE, Queen's University  
2019-2021 **Graduate Research Assistant**, Department of ECE, University of Saskatchewan  
2016-2018 **Research Intern**, Machine Vision Lab, IUST

## Technical Skills




### Programming Languages:

Python 3.x   
MATLAB   
Verilog/VHDL   
HSPICE 

### Python Libraries:

PyTorch   
Tensorflow 2.x/Keras   
Numpy/Scipy/Pandas   
OpenCV/Scikit-image 

### General Tools:

Git   
LaTeX   
MS Excel   
Adobe Photoshop 

## Teaching Experience

2021-2022 **Computer Architecture**, Teaching Assistant  
2020-2021 **Microprocessor Interfacing and Embedded Systems**, Teaching Assistant  
2017-2018 **Microprocessors**, Teaching Assistant

## Outreach & Professional Development

### PEER REVIEW

IEEE Transactions on Artificial Intelligence Machine Vision and Applications, Springer  
Imaging Science Journal, Taylor & Francis

### SERVICE AND OUTREACH

2020 **Engineering Graduate Community Council at the University of Saskatchewan (EGCC)**, VP of student affairs  
2019 **Iranian Students' Council at the University of Saskatchewan (ISC)**, VP of administration

### DEVELOPMENT

**Engineering three minuet thesis**, Competing in the 2nd EGCC three-minute thesis (3MT) competition and organizing the 3rd EGCC 3MT event.

## Research Experience

**Michael Greenspan**, Professor at the Department of Electrical and Computer Engineering, Queen's University  
✉ michael.greenspan@queensu.ca

**Ali Etemad**, Assistant Professor at the Department of Electrical and Computer Engineering, Queen's University  
✉ ali.etemad@queensu.ca

**Seok-bum Ko**, Professor at the department of Electrical and Computer Engineering and the Department of Biomedical Engineering, University of Saskatchewan  
✉ seokbum.ko@usask.ca

**Shahriar B. Shokouhi**, Associate Professor at School of Electrical Engineering, Iran University of Science and Technology, Queen's University  
✉ bshokouhi@iust.ac.ir