Pouya Karimian

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in /in/pouya-karimian

🎓 EDUCATION

09/2018-09/2021
Tehran, Iran

> **M.Sc | Healthcare Systems Engineering**
> **Amirkabir University of Technology**

Main focus: Machine learning and data science in healthcare
Thesis: Human pose estimation for elderly
GPA: 19.03/20-4/4
Relevant coursework:

- Selected topics in indust.eng. (Computer vision in healthcare)
- Data-driven modeling in healthcare
- Healthcare informatics
- Modeling, optimization and computer simulation of health systems
- Fuzzy sets in decision making and planning
- Deep learning specialization(coursera)

09/2014-09/2018
Tehran, Iran

> **B.Sc | Industrial Engineering**
> **Amirkabir University of Technology**

Main focus: Data analysis and optimization
Final project: Simulation of dosage and frequency of Aspirin intake based on Markov chain
GPA: 17.66/20-3.75/4 (last two years)
Relevant coursework:

- Probability theory and applications
- Engineering statistics
- Management information systems
- Linear algebra
- Operations Research (I) and (II)
- Principles of simulation

👥 RELEVANT EXPERIENCES

❯ Teaching experience

01/2020-07/2020

teaching assistant
Fuzzy sets in decision making and planning (graduate course)
Industrial Engineering Department, Amirkabir University of Technology
- Supervisor: Dr gamasaee
- Holding tutorials on Matlab basics and fuzzy library in Matlab
- Managing online discussion group for student queries

01/2019-07/2020

teaching assistant
Introduction to simulation (undergraduate course)
Industrial Engineering Department, Amirkabir University of Technology
- Supervisor: Prof. Ahmadi
- Holding tutorials on Matlab basics and simulation examples coding in Matlab and Arena
- Grading assignments and Managing online discussion group for student queries

❯ Research experience

10/2021-10/2022

research assistant
Information Technology Research Department
Iranian Research Institute for Information Science and Technology
- Supervisor: Prof. Fakhrzadeh
- conducted research on segmentation of histology images using deep learning

01/2019-09/2021	**Master's student**
	Health Systems Laboratory, Amirkabir University of Technology

- Supervisors: Prof. Ahmadi, Prof. Jalalimanesh
- conducted research in the area of computer vision in healthcare
- propose a new CNN for human pose estimation in elderly care

❯ Professional experience

03/2017-12/2018	**product manager**
	Habiox(intelligent physiotherapy assistant)

- Worked in a team and led the group for making a software with Kinect for patients need physiotherapy exercises

07/2018-09/2018	**intern**
	Decision Support System Lab
	Iranian Research Institute for Information Science and Technology

- Analysis of static work using discomfort recording with Kinect
- programming a Matlab code that analyze posture by OWAS method and input of Kinect

🖵 PROJECTS AND PUBLICATIONS

❯ Deep learning-based method for segmenting epithelial layer of tubules in histopathological images of testicular tissue
A Fakhrzadeh[*], **P Karimian**[*], M Meyari[*], CL Luengo Hendriks, L Holm, C Sonne, R Dietz, E Spörndly-Nees
(* equal contribution)
accepted in Journal of Medical Imaging
 Code Paper

| deep learning | image segmentation | CNN | histology image | Seminiferous tubules |

⚙ SKILLS

</> Programming	**python**[PyTorch, Tensorflow, OpenCV, scikit-learn, Albumentations] **Matlab**[Statistics and Machine Learning, Image processing, Fuzzy Logic and Optimization Toolbox]
⚙ Softwares	LaTeX - **microsoft office**[word,excel,powerpoint,visio] **simulation tools**[Netlogo - Arena]
🅰 Languages	**persian**: Native **english**: Advanced
✸ Test scores	**TOEFL**: 104 - Reading:29 Listening:28 Speaking:23 Writing:24(15th October 2022)

⊕ RESEARCH INTERESTS

Machine learning, Computer vision, Medical Imaging, human pose estimation, Image segmentation

🏆 HONORS AND AWARDS

❯ member of **"Excepted talents"** of Amirkabir University of Technology in Masters period and receiving grant
❯ Ranked **5**[th] in Iran scientific olympiad of industrial engineering in 2018 containing optimization,probability theory and engineering statistics (certification in persian)
❯ Ranked among top **1 percentage** in both national graduate entrance exam in industrial engineering and national undergraduate entrance exam