

RESEARCH INTERESTS

- Theoretical and Applied Machine Learning
- Computer Vision
- Medical Imaging
- Black-box Optimization
- Bioinformatics

EDUCATION

University of California Riverside M.Sc. in Computer Science, GPA to date: 3.95/4 – Advisors: Samet Oymak, Amr Magdy	Riverside, USA 2019–Current
Sharif University of Technology B.Sc. in Computer Science, GPA: 17.35/20	Tehran, Iran 2014–2019

RESEARCH EXPERIENCE

Generalizing Geographically Weighted Regression Model With Prof. Oymak and Prof. Magdy – Improving the speed and accuracy of a spatially-varying coefficient model. We are combining and customizing different black-box optimization methods, such as Hyperband, on our own spatially-varying weighting system.	Ongoing
Detecting and Recognizing Persian texts in Images With Prof. Mostafa Kamali – An end-to-end trainable scene text detector with our own synthetic text generator engine without any human labelled data. we rendered the crawled words from Persian Wikipedia with different fonts and put them on natural images. Then we used various augmentation techniques to build the data set. In the end we used transfer learning on a model trained for English words to compute the weights for Persian words.	Summer 2018-Winter 2019

PROJECTS

See full list of projects and their descriptions on www.mohammad-reza.com/projects

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| <ul style="list-style-type: none">Covid-19(Python, PyTorch, Keras - 2020)• Detecting Covid-19 cases from chest Xray images with accuracy over 97% and recall of 95%.YOLO implementation(Python, PyTorch - 2020)• Implementing YOLO from Scratch.Phylogenetic Tree of Ebola Viruses(R - 2018)• Using the genomics data to build the Phylogenetic treeGraphical Chess(Java - 2016)• Graphical Chess application with AI. Using Alpha-Beta pruning with weights computed by playing itself. | <ul style="list-style-type: none">Pedestrian Detection(Python, PyTorch - 2020)• Detecting and tracking pedestrians in videos using both HOG features and deep networks.Shelem Application(Unity, React, Node.js - 2020)• Online Multiplayer Card Game. We, team of 4 people, developed an online and multiplayer version of a popular Persian card game called ShelemTexture synthesizing, Active Contour,...(MATLAB)• Implementing famous image processing and computer vision methods. |
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SCHOLARSHIPS AND AWARDS

- UCR's Graduate Fellowship Award 2019–2020
- Ranked 4th in Iran's national university entrance exam (Konkour) for masters degree 2019
- Scholarship from Iran's National Elites Foundation 2014–2015
- Ranked 6th in the ACM-IPC Contest, Shiraz, Iran 2014
- Silver Medal in the Iranian National Olympiad in Informatics 2013

TEACHING

- **Teaching Assistant** at University of California Riverside Fall 2020
Introduction to Programming
- **Teaching Assistant** at Sharif University of Technology
Basic Programming, Prof. Zarei Winter 2019
Data structures, Prof. Foroughmand Fall 2018
Automata and Language Theory, Prof. Khazaei Fall 2018
Design and Analysis of Algorithms, Prof. Zarei Spring 2018
Data structures, Prof. Khazaei Fall 2017
Design and Analysis of Algorithms, Prof. Khazaei Spring 2017
Advanced Programming, Dr. Boomari Spring 2016
- **Algorithm and Programming Teacher** at Rahyar Educational Complex 2015-2017
Teaching C++ programming, Algorithms, and Problem Solving Strategies to high school students preparing for Olympiad in Informatics.

WORKING EXPERIENCE

- Ronash Corporation** Tehran, Iran
Front-End Developer Fall 2017
 - Developed the front-end of a website about mobile applications statistics using React.
- Summer Internship at Rahnema Corporation** Tehran, Iran
Front-End and Back-End Developer Summer 2017
 - Developing a location based social media app for Android and iOS. In this project, As a team of 4 people, we created a location based social media app for Android and iOS. We used React Native for our mobile front-end, Node.js for back-end, and MongoDB for our database.
- Iran's National Elite Foundation** Tehran, Iran
Exam Designer Fall 2016
 - Designing question for the first round of the 25th Iranian National Olympiad in Informatics.

SKILLS

- **Programming Languages:** Python, C++, Java, MATLAB, Java Script, React, R, React native
- **Libraries and Technologies:** Git, PyTorch, Keras, Colyseus, Unity 2D, MongoDB
- **Team work:** Experience in working with Scrum framework