SEYED ALIREZA FATEMIJAHROMI

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Tehran, Iran

EDUCATION

Sharif University of Technology, Tehran   *2016 - Present*
Bachelor of Science in Computer Engineering
Total GPA: 18.62/20 (3.9/4) — Last two years' GPA: 19.36/20 (4/4)
Shahid Dastgheib High School, Shiraz   *2012 - 2016*
Diploma, National Organization for Development of Exceptional Talents (NODET)   GPA: 19.69/20

RESEARCH INTERESTS

Computer Vision & Graphics
Machine Learning & Deep Learning
Artificial Intelligence
Software Engineering

HONORS

Recipient of the grant and membership of **Iran's National Elites Foundation**, for outstanding academic success.   *Summer 2016 - Present*

Ranked among the **top 10** teams in PAIP2020 Challenge. We are invited to present our method at the 2020 virtual KOSOMBE Conference: PAIP2020, AI Pathology Challenge Workshop - South Korea, Nov 12, 2020. I am one of the two members of Sharif HooshPardaz Team, Supervised by Prof. Soleymani and Prof. Behroozi.   *Fall-2020*

Ranked in **5th** Multi-organ Nuclei Segmentation and Classification (MoNuSAC) 2020 Challenge and Ranked **3rd** in the Post-Challenge Leaderboard. MoNuSAC 2020 Challenge was an official satellite event of ISBI 2020. I was one of the three members of Sharif HooshPardaz Team. We were invited to present our method in the MoNuSAC 2020 Workshop.   *Spring-2020*

Ranked **3rd** in the Eleventh Sharif VC Cup. I was a member of Sharif HooshPardaz Team. *Winter-2020*

Reached the final stage of Artificial Intelligence Challenge in Medical Imaging 2019, Intelligent Assessment of Imaging Biomarkers of Dementia.   *Fall-2019*

Ranked **8th** in the MICCAI Automatic Prostate Gleason Grading Challenge 2019. We were invited to present our method in MICCAI 2019 conference, which was held in October 2019, Shenzhen, China. *Fall 2019*

Ranked **3rd** in the First National EEG Data Analysis Competition with Clinical Applications organized by National Brain Mapping Lab (NBML).   *Summer-2019*

Ranked **1st** in the third Sharif ICT Challenge (Fintech) among 65 chosen teams.   *Summer 2019*

Ranked **12th** in code-cup contest among approximately 3100 participants.   *Fall 2018*

Ranked **top 0.08%** in the National Entrance Exam (Konkoor) among all Iranian Students (Ranked **131th** among approximately 163000 applicants) in Math. & Physics.   *2016*

Ranked **top 0.1%** in the National Entrance Exam (Konkoor) among all Iranian Students (Ranked **229th** among approximately 115000 applicants) in Foreign Languages.   *2016*

TEST SCORES

TOEFL (31 October 2020): Internet-Based Test **113/120**
Reading(**30/30**), Listening(**30/30**), Speaking(**26/30**), Writing(**27/30**)

PUBLICATIONS

[1]* A. Khani, **S.A. Fatemi Jahromi**, H. Otroshi Shahreza, H. Behroozi, M. Soleymani Baghshah, "Towards Automatic Prostate Gleason Grading via Deep Convolutional Neural Networks", *The 5th Iranian Conference on Signal Processing and Intelligent Systems (ICSPIS 2019)*, Shahrood, Iran, 2019

[2]* **S.A. Fatemi Jahromi**, A. Khani, H. Otroshi Shahreza, B. Otroshi Shahreza, H. Behroozi, M. Soleymani Baghshah, "A Deep Learning Framework for Viable Tumor Burden Estimation", Submitted

RESEARCH & WORK EXPERIENCE

Robust and Interpretable Machine Learning Lab, Tehran
Summer 2020 - Present
Researcher

I'm currently working on my undergraduate thesis in the Robust and Interpretable Machine Learning Lab under the supervision of Prof. Rohban. My thesis is about the use of Semi-Supervised Learning and Self-Supervised Learning in the context of Adversarial Robustness.

Iran's National Elites Foundation, Shahid Ahmadi Roshan Projects, Tehran
Spring 2019 - Summer 2020 (18 months)
Researcher

I was a member of a project funded by Iran's National Elites Foundation, supervised by Prof. Behroozi and Prof. Soleymani, and focused on Medical Image Analysis.

. My main objective in this project was to research state-of-the-art Deep Learning and Computer Vision methods and apply them to different applications in Medical Image Analysis. My research was focused on the classification and segmentation of different types of cancer in digital pathology images. I worked with gigapixel whole-slide images from various organs such as the Liver, Colon, and Prostate. I also worked on classifying and segmenting COVID-19 patients' CT Scan images and 3D brain MRI images. I gained experience working with different learning paradigms such as Self-Supervised Learning, Semi-Supervised Learning, and Multiple-Instance Learning.
. During this time, I also led a software team of two plus myself as a side-project. We developed a follow-up automation software used to discharge patients and help hospitals and clinics stay in touch with their patients and coordinate patients' next check-ups. It also provided patients with educational content. We developed this system for Sina Hospital. Some of the technologies we used in this project comprise React, Next.js, GraphQL, WordPress, Django, Firebase.

Iran's National Elites Foundation, Shahid Ahmadi Roshan Projects, Tehran
Spring 2019 - Summer 2019 (6 months)
Front-end Web Developer

I was a member of a project funded by Iran's National Elites Foundation and supervised by Prof. Heydarnoori, focused on developing a Real-time locating system. I worked as a Front-end Web Developer, and my main task was to create the admin panel of this system. Some of the technologies I used in this project comprise React, Redux, Redux-Saga.

Rahnema College Internship, Tehran   *Summer 2018*
Software Engineer & Team Leader

During the 7-week internship program, I gained experience in the various areas of Software Development such as Scrum, UI/UX, Full Stack Development, etc.

TEACHING EXPERIENCE

Database Design, Teacher Assistant, Fall 2020, Instructor: Prof. A. Heydarnoori, Department of Computer Engineering, Sharif University of Technology

TECHNICAL STRENGTHS

Programming Languages	C, C++, Python, Java, Kotlin, JavaScript, TypeScript, MATLAB, Racket, Scheme, Swift
HDL	Verilog
Machine Learning	TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy
Software & Tools	LaTeX, Git, JIRA, Adobe XD, Adobe Tools
Web	React, ReactNative, Django, Gatsby, Next, GraphQL, Docker, Flask

LANGUAGES

Persian: Mother Tongue
English: Fluent

REFERENCES

Prof. Dr. Hamid Behroozi
Assistance Professor, Electrical Engineering Department, Sharif University of Technology, Tehran, Iran. Email: behroozi@sharif.edu

Prof. Dr. Mahdieh Soleymani Baghshah
Assistance Professor, Computer Engineering Department, Sharif University of Technology, Tehran, Iran. Email: soleymani@sharif.edu

Prof. Dr. Abbas Heydarnoori
Assistance Professor, Computer Engineering Department, Sharif University of Technology, Tehran, Iran. Email: heydarnoori@sharif.edu

Prof. Dr. Mohammad Hossein Rohban
Assistance Professor, Computer Engineering Department, Sharif University of Technology, Tehran, Iran. Email: rohban@sharif.edu