Seyed Alireza FatemiJahromi

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RESEARCH INTERESTS

Visual Computing, Geometry Processing, Deep Learning, Generative Modeling, Game Design

EDUCATION

- **Aalto University, Espoo, Finland** *Aug. 2021 - Expected Aug. 2023*
  Master of Science in Computer Science (Big Data and Large-Scale Computing) GPA: 4.85/5
- **Sharif University of Technology, Tehran, Iran** *Sep. 2016 - May 2021*
  Bachelor of Science in Computer Engineering
  Total GPA: 18.60/20 (3.89/4) — Last two years' GPA: 19.21/20 (3.96/4)
- **Shahid Dastgheib High School, Shiraz, Iran** *2012 - 2016*
  Diploma, National Organization for Development of Exceptional Talents (NODET) GPA: 19.69/20

HONORS

- Recipient of the outstanding achievement award for outstanding performance in the Cloud Software and Systems course at Aalto CS. *Fall 2021*
- Recipient of the grant and membership of **Iran's National Elites Foundation** for outstanding academic success. *Summer 2016 - 2021*
- Ranked $\mathbf{5^{th}}$ in PAIP 2020 Challenge. I was one of the two members of Sharif HooshPardaz Team, supervised by Prof. Soleymani and Prof. Behroozi. I presented our method at the AI Pathology Challenge Workshop at the Virtual KOSOMBE Conference. *Fall-2020*
- Ranked $\mathbf{5^{th}}$ in Multi-organ Nuclei Segmentation and Classification (MoNuSAC) 2020 Challenge and ranked $\mathbf{3^{rd}}$ 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. I presented our method at the MoNuSAC 2020 Workshop. *Spring-2020*
- Ranked $\mathbf{3^{rd}}$ in the Eleventh Sharif Festival of Entrepreneurship and Business Development (VC cup). I was a member of Sharif HooshPardaz Team. *Winter-2020*
- Reached the final stage of Artificial Intelligence Challenge in Medical Imaging focused on Intelligent Assessment of Imaging Biomarkers of Dementia. *Fall-2019*
- Ranked $\mathbf{8^{th}}$ in Gleason 2019 Challenge, one of the three challenges under the MICCAI 2019 Grand Challenge for Pathology. I presented our method at the Gleason 2019 Workshop. *Fall 2019*
- Ranked $\mathbf{3^{rd}}$ in the First National EEG Data Analysis Competition with Clinical Applications organized by National Brain Mapping Lab (NBML). *Summer-2019*
- Ranked $\mathbf{1^{st}}$ in the Third National Sharif ICT Challenge (Fintech) among 65 chosen teams. *Summer 2019*
- Ranked $\mathbf{12^{th}}$ in the Fourth National Code Cup Contest among approximately 3100 participants. *Fall 2018*
- Ranked among the **top 0.08%** in Iran's National University Entrance Exam (Konkoor) among all Iranian Students (Ranked $\mathbf{131^{st}}$ among approximately 163000 applicants) in Math & Physics. *2016*
- Ranked among the **top 0.1%** in Iran's National University Entrance Exam (Konkoor) among all Iranian Students (Ranked $\mathbf{229^{th}}$ among approximately 115000 applicants) in Foreign Languages.

RESEARCH & WORK EXPERIENCE

Aalto University, Espoo, Finland
Research Assistant — Jan 2022 - Current

I'm currently working as a research assistant under the supervision of Prof. Jaakko Lehtinen. My research is related to generative modeling.

University of Toronto, Dynamic Graphics Project Lab, Remote
Research Assistant — Summer 2021

I worked as a research assistant under the supervision of Prof. Alec Jacobson. My topic of research was about Geometry Processing and Computer Graphics combined with Machine Learning.

Robust and Interpretable Machine Learning Lab, Sharif University of Technology, Tehran
Research Assistant — Summer 2020 - Spring 2021

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

Iran's National Elites Foundation, Tehran, Iran
Research Assistant — Spring 2019 - Summer 2020 (18 months)

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 using Deep Learning. 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.

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

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, and Redux-Saga.

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

During this 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

Data Structures and Algorithms
Teaching Assistant — Fall 2021 *Department of Computer Science, Aalto University*
Instructor: Prof. Ari Korhonen

Basics in Programming Y1
Teaching Assistant — Fall 2021 *Department of Computer Science, Aalto University*
Instructor: Prof. Barbara Keller

Database Design
Teaching Assistant — Fall 2020 *Department of Computer Engineering, Sharif University of Technology*
Instructor: Prof. Abbas Heydarnoori

TEST SCORES

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

TECHNICAL STRENGTHS

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

For more information, please visit my website at seyedalirezafatemi.github.io.