AMIR-HOSSEIN SHAHID ZADEH

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EDUCATION

Sharif University Of Technology, Tehran, Iran *2016 - Present*
BSc. of Computer Engineering GPA: *overall: 3.74/4, major: 3.83/4*
Department of Computer Engineering

Shahed Ansar High school, Ahwaz, Iran *2013 - 2016*
Diploma in Mathematics and Physics Discipline. GPA:*18.75/20* (top 5 of school)

RESEARCH INTERESTS

– **Computer Vision**
– **Robotics**
– **Reinforcement Learning**
– **Self-Driving Car & UAVs**
– **Depth Estimation**
– **Semantic Segmentation**
– **Medical Image Analysis**
– **Domain Adaptation**

TECHNICAL SKILL

Programming	Python, C/C++/C#, Java, MATLAB, Verilog, PHP, HTML, CSS Javascript, SQL, elasticsearch.
Python Libraries	Tensorflow, Keras, PyTorch, Scikit-Image, Pandas, Numpy, OpenCV, Matplotlib.
C++ Libraries	OpenCV/CL, Pylon, ImageMagick, Turbo-jpeg, Boost, Thrift.
Linux	Bash Programming, Makefile.
DBMS	MySQL, PostgreSQL.
Software & Tools	Sphinx(Gazebo), Olympe, ROS, PyCharm, Visual Studio, IntelliJ, LaTeX, PhpStorm, ModelSim, Quartus.

WORK EXPERIENCE

CennaLab *May 2019 - Present*
at Green Silver Leaves

We are pushing the limits of AI by inventing a scanner for detecting cancer cells from Medical images using Neural Networks. It is an automated scanner for Medical images which first iterates the slides and captures high-quality images using Basler cameras afterward, the captured images will be stitched to make our dataset and as the inputs of CNN for Localizing cells. It is in final safety test stages and we are obtaining a patent for our invention. then, we will start to write a paper about it. I am in the Computer Vision team and have contributed in Stitching, Pap Smear Cancer Classification, Cell Segmentation, Cell Counting, Continuous Auto-Focus, Camera Path Planning, Streaming codes in Python (Tensorflow 2) and C++. (Company Website)

[0] *Grading scales are based on the McGill grade equivalencies for Iran*

RESEARCH EXPERIENCE

Research Assistant at Quadpet Project *April 2019 - Present*
at Sharif University - Data Science & Machine Learning Lab (DML website)

Under supervision of Dr. MH. Rohban & Prof. Hamid R. Rabiee

The project working with the robots aims at collision avoidance with monocular images deploying Reinforcement Learning, Autoencoders and Feature Extractors. we are trying to use transfer learning methods like domain adaptation using various GANs for training policies in a dense simulation world and testing it in the real world. our main contribution is using a small amount of data for training due to using feature extractor followed by a simple neural network architecture for this purpose.

Research Assistant *September 2020 - Present*
at École Polytechnique Fédérale de Lausanne - Visual Intelligence for Transportation (VITA website)

Under supervision of Prof. Alexander Alahi

We have just been started research topic about improving the performance of predictive models when training and test data come from different distributions.

HONORS AND AWARDS

- **Top-Ranked Students Scholarship From National Elite Foundation** for Graduate Studies in Artificial Intelligence at Sharif University. *(acceptance rate: 8.6%)*

- **Undergraduate Excellence Award at CAMP** Internship program under supervision of Prof. Nassir Navab & Prof. Federico Tombari at Techincal University Munich. *(acceptance rate: 6.6%)*

RELEVANT COURSES

Coursera
– Applied Machine Learning in Python (University of Michigan)
– Fundamentals of Digital Image and Video Processing (Northwestern University)
– Introduction to Data Science in python (University of Michigan)

Sharif University of Technology
– Machine Learning (Dr. K. Kadkhoda) Grade: *4/4*
– Artificial Intelligence (Dr. MH. Rohban) Grade: *4/4*
– Linear Algebra (Dr. N. Bagherpour) Grade: *4/4*
– Probability and Statistics (Dr. H. Peyvandi) Grade: *4/4*
– Neural Modeling (Dr. B. Vosoughi Vahdat) (Grad Course) Grade: *3/4*
– Multimedia Systems (Dr. M. Amiri) Grade: *4/4*

Audited Graduate Courses
– Deep Learning (Prof. M. Soleymani) *Computer Eng. Dep.*
– Image Processing (Prof. SH. Kasaei) *Computer Eng. Dep.*
– Convex Optimization (Dr. M. Tefagh) *Mathematics Dep.*
– Neural Networks (Prof. S. Bagheri Shouraki) *Electrical Eng. Dep.*
– Probabilistic Graphical Models (Dr. A. Amini, Dr. Malek Araei) *Electrical Eng. Dep.*

TEACHING

- Teacher Assistant of Machine Learning *Sharif University of Technology*
Dr. A. Hosseini

- Teacher Assistant of Linear Algebra *Sharif University of Technology*
Prof. A. Motahari, Dr. E. Monifi

- Teacher Assistant of Artificial Intelligence *Sharif University of Technology*
Prof. H. Peyvandi

- Teacher Assistant of Probability and Statistics *Sharif University of Technology*
Prof. N. Omidvar

- Teacher Assistant of Computer Networks *Sharif University of Technology*
Prof. M. Jafari Siavoshani

- Teacher Assistant of Signals & Systems *Sharif University of Technology*
Prof. Hemmatyar

- Teacher Assistant of Digital System Design *Sharif University of Technology*
Prof. A. Ejlali

- Teacher Assistant of System Design & Analysis *Sharif University of Technology*
Prof. M. Taromi Rad

- Teacher Assistant of Data Transmission *Sharif University of Technology*
Prof. Hemmatyar

- Teacher Assistant of Multimedia Systems *Sharif University of Technology*
Dr. M. Amiri

LANGUAGE

Persian (Native), English (conversant)

HOBBIES

Mountaineering (Mount Damavand 5610m), Tennis