AHMAD POURIHOSSEINI

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B.S. student in Computer Engineering at University of Tehran, ranking 1st in GPA among CE students and recipient of the FOE award for top GPA for three consecutive years, seeking to utilize the knowledge I have obtained in the field of Machine learning through university courses, self-study, as well as my Bachelor's thesis to undertake research in this field on an M.S. level.

EDUCATION

Sep. 2015 - Now

B.S. in Computer Engineering - Software
School of Electrical and Computer Engineering
The Department of Software Engineering
University of Tehran, Tehran, Iran
Expected graduation: January 2020
Cumulative GPA: 19.39 / 20 - Ranking 1st among CE Students

Sep. 2011 - Jun. 2014

Diploma in Mathematics and Physics Discipline
Allameh Helli 3 High School
Affiliated with the National Organization for Development of Exceptional Talents (NODET)
GPA: 19.89 / 20

RESEARCH EXPERIENCE

Feb. 2019 - Now

Research Assistant, Machine Learning and Computational Modeling Lab at University of Tehran
I am working with a graduate student on methods to increase the diversity of the adversarial perturbations generated by a specific adversarial generator, in order to increase the robustness of adversarial defense modules that are trained using those perturbations. This research is also the subject of my bachelor's thesis, whose advisor is Dr.Araabi.

Mar. 2018 - Aug. 2018

Research Assistant, Intelligent Information Systems Lab at University of Tehran
I helped the main researcher solve an optimization problem by writing code for and experimenting with different optimization algorithms. The result of this optimization would determine how much improvement his text retrieval method, which was a variation of the positional language model (PLM), offerd over the existing ones.

Sep. 2011 - May. 2012

EUROMATH
The abstract of my paper, titled "Prefix Codes and Data Compression" was accepted for presentation at EUROMATH 2012, but unfortunaltely, due to Visa issues I was unable to attend this conference.

TEACHING EXPERIENCE

I have been a TA for the following courses in University of Tehran:

Artificial Intelligence - Fall 2019 - Dr. Fadaei and Dr. Moradi
Formal Methods in Software Engineering - Fall 2019 - Dr. Faghih
Advanced Programming - Spring 2019, Fall 2018, Spring 2018 - Dr. Khosravi and Dr. Sadeghi
Discrete Mathematics – Spring 2018, Fall 2017 - Dr. Mohammadi
Engineering Probability and Statistics – Fall 2018, Fall 2017 - Dr. Bahrak
Database Systems – Spring 2019, Fall 2018 - Dr. Shakery

SELECTED PROJECTS

Apr. 2019 — **Pet Colorizer**
Personal project
A neural network that can turn your grayscale images of pets into colored ones. It was built using fastai and it can be found here.

Spring 2018 — **Digit recognizer**
Course project - Artificial Intelligence
A neural network for the classification of MNIST-like digits, built from scratch using python and without the use of any external libraries.

Spring 2018 — **KhaneBeDoosh**
Course project - Internet Engineering
A fully fledged web-application for house rental and sale, using Java, react, and mySQL.

Fall 2017 — **Atalk**
Course project - Compiler Design and Implementation
Full implementation of a compiler for Atalk - an actor-based programming language - with MIPS as its target instruction set, using Antlr4 and Java.

Spring 2017 — **MIPS processor**
Course project - Computer Architecture
Full verilog implementation of a MIPS processor with a limited instruction set that utilized pipelining.

PROFESSIONAL EXPERIENCE

Jun. 2019 - Aug. 2019 — **Intern at Sensifai**
I was tasked with the preparation of an instance of Coral Dev Board for running a set of object classification and detection models in an offline setting. The board would receive its inputs via camera and display the results on a monitor. This internship helped me better understand the practical sides of machine learning.

Jun. 2017 - Aug. 2017 — **Back-end developer at Boghche**
I was responsible for the development of a Telegram bot that would receive orders from customers and register them in the central system. This job helped me gain a great degree of knowledge in back-end web development.

AWARDS AND HONORS

Supporter Foundation of University of Tehran (SFUT) Honorable Student Award, 2019
I won this award because, for four consecutive years, I had the highest GPA among students of my major at University of Tehran.

Faculty of Engineering (FOE) Award for three consecutive years: 2016, 2017, and 2018
This award is given to the three students with the highest GPAs per major. In all three cases, I received the award because I had the highest GPA among the students in my major.

Accepted in the first stage of the national mathematical olympiad of Iran, 2014

ADDITIONAL ACTIVITIES / VOLUNTARY WORK

Jun. 2018 - Aug. 2018

Deep Learning Specialization by Andrew Ng on Coursera

Auditing this course greatly broadened my knowledge of deep learning. It taught me about many topics ranging from the very basic like different optimization algorithms and hyperparameter tuning, all the way to the more advanced like object detection, face recognition and neural style transfer.

Summer 2017, Summer 2018

Deep Learning Summer School attendee

This was my first introduction to deep learning. It provided both a theoretical foundation, via lectures and invited speakers and a practical experience through computer assignments and hands-on sessions.

Sept. 2016 - Aug. 2017

Layout Designer for the *F1* publication of the ACM student chapter of the University of Tehran

My job was designing the graphical layout of the content, and creating the final ready-to-print file, using Adobe InDesign.

Sept 2013 - Mar. 2014

16th Khwarizmi Youth Festival, 2015

My poject in this annual festival was a computer program that would receive an image as input and then search the database for images closest to the input in terms of color and texture features. I was accepted in the first stage of the selection process.

RELEVANT SKILLS

- Advanced knowledge of PyTorch and intermediate knowledge of Tensorflow, two of the most popular deep learning libraries.
- Advanced knowledge of Fast.ai which provides a high-level API on PyTorch, dramatically increasing the speed of ML projects.
- Fluent in the programming languages C, C++, python, Java, and javascript.
- Working knowledge of SQL databases, and a noSQL database.

LANGUAGES

Persian – Bilingual

Azeri Turkish – Bilingual

English – Fully proficient

Scores of the TOEFL test taken in September 2018: Overall: 114, Reading: 28, Listening: 28, Speaking: 30, Writing: 28

Scores of the GRE test taken in October 2019 : Q: 168, V: 159, W: 4

Turkish – Advanced