

Seyyed Soroush Mortazavi Moghaddam

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PERSONAL STATEMENT

Motivated computer engineering student, seeking to conduct research and continue his studies in the field of **computer science**, with a focus on **artificial intelligence**

Fields of interest:

- Machine/Deep learning
- Reinforcement learning
- Computer vision

EDUCATION

Amirkabir University of Technology

Tehran, IRAN

Bachelor of Science in computer engineering

Sep. 2016 – Jan. 2022 (Expected)

- Total GPA: **3.86/4** — Last two year GPA: **4/4**
- Thesis: Learning the game of Gobblet through reinforcement learning

Shahid Beheshti High School of Exceptional Talents

Qayen, IRAN

Diploma of mathematics and physics

Sep. 2012 – Jun. 2016

EXPERIENCE

Computational Intelligence Teaching Assistant

Supervisor: Prof. Ebadzadeh

(2 semesters) Sep. 2020 – Jun. 2021

Data Mining Teaching Assistant

Supervisor: Dr. Nazerfard

Feb. 2021 – Jun. 2021

Computer Architecture Teaching Assistant

Supervisor: Dr. Zarandi

Sep. 2019 – Jan. 2020

Operating Systems Teaching Assistant

Supervisor: Dr. Zarandi

Feb. 2020 – Jun. 2020

Principles of Cloud Computing Teaching Assistant

Supervisor: Dr. Javadi

Feb. 2021 – Jun. 2021

As a teaching assistant in the courses mentioned above:

- Coordinated the teaching assistance team
- Designed and graded assignments, test-quizzes and course projects
- Created video tutorials for assignment solutions, course materials and extra resources
- Helped students with their questions and problems regarding the assignments and the projects

Research and Development Intern

Tehran, IRAN

Sobhe - AI knowledge enterprise

Jul. 2020 – Oct. 2020

- Gathered a Persian text corpus by developing a web crawler application
- Used the mentioned corpus to learn Persian word embeddings
- Cooperated in the data gathering and the design of a stock market predictor model

SKILLS

Programming Languages: Python, MATLAB, Java, C, JavaScript, SQL-Server

Frameworks and Libraries: TensorFlow, PyTorch, Keras, TensorBoard, Numpy, Scikit-learn, Pandas, Matplotlib

Developer Tools: Git, Google Colab, Jupyter lab, VS Code, PyCharm, IntelliJ, Code::Blocks

Languages: English (Advanced) [TOEFL-ibt: **109**, R:30, L:27, S:27, W:25], Persian (Native)

GRE: 318 [Q:166, V:152]

HONORS AND AWARDS

Ranked 19th/30K: In the national university entrance exam among 30 thousand students (2016)

Announced as an Outstanding Student: in Amirkabir University of Technology

TOP WORK AND SELECTED COURSE PROJECTS

Learning The Game of Gobblet (B.Sc Thesis) | *Python*

under the supervision of Prof. Safabakhsh

Sep. 2020 – Sep. 2021

- Implemented self-play with Monte-Carlo learning and used a combination of DNN value function, Monte-Carlo tree search and minimax search to act as close as possible to the optimum policy, i.e, the Nash equilibrium
- Implemented a user interface to play the game against the self-learned AI

Artificial Intelligence Related Course Projects

Sep. 2019 – Jun. 2021

- Solved the Rubik's Cube by Implementing A*, bi-directional and IDS algorithms | *python*
- Implemented MLP neural networks, evolutionary algorithms and fuzzy C-means clustering | *python*
- Implemented an image compressor (K-means) and a voice gender recognizer | *MATLAB*
- Solved CSP problems using AC-3 algorithm | *python*
- Implemented a text classification program using n-grams | *python*
- Implemented pairwise and multiple sequence alignment algorithms (Clustal, HMMs, PSSM, etc.) | *python*

Portal CAPTCHA Solver | *Python*

Oct. 2019

- Implemented an application to solve university's portal CAPTCHA and sign in
- Gathered the training data by a script and trained a CNN model on them

Stock Market Predictor | *Python*

under the supervision of Prof. Safabakhsh

Mar. 2020 – Jul. 2020

- Learned about time series data, various layer types and how to work with TensorFlow, TensorBoard and Keras; also to efficiently design and train DNNs
- Gathered and preprocessed Iran's stock data, then experimented many different DNN architectures on them

Java Projects

Feb. 2017 – Jun. 2017

- Developed a download manager application for Windows
- Developed a multiplayer tank game (similar to NormalTanks)

E-Shop | *Python, JavaScript, HTML, CSS*

Feb. 2021 – Jun. 2021

- Full stack development of an E-Shop website

OTHER ACTIVITIES

Online Courses

- Machine learning, by Andrew Ng: Coursera (100/100)
- Reinforcement learning, by David Silver: Audited

Curriculum advisor

(Remote) Tehran, IRAN

Iliyasteel - educational group

Sep. 2020 - Jun. 2021

- Guided and advised a group of high school students with their study plan and study method during the year

Volunteer member

Tehran and Qayen, IRAN

Sepehr NGO - cultural enrichment and empowerment foundation

Jan. 2017 - Present

Abolmafakher NGO - student-operated foundation, for educational and cultural development

Jul. 2017 - Sep. 2018

- Helped design and create graphical materials and advertisements (posters, banners, Brochures, id cards, etc.)
- Helped with the holding of several educational and cultural events, contests and meetings in Tehran and Qayen

REFERENCES

Reza Safabakhsh, *Professor*: safa@aut.ac.ir

Mohammad Mehdi Ebadzadeh, *Professor*: ebadzadeh@aut.ac.ir

Hamidreza Zarandi, *Assistant professor*: h_zarandi@aut.ac.ir

Ehsan Nazerfard, *Assistant Professor*: nazerfard@aut.ac.ir

Seyyed Ahmad Javadi, *Assistant Professor*: sajavadi@aut.ac.ir