Seyed Reza Shirazi

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Objective

Passionate and highly skilled **software developer** with a **strong academic background** in Digital Electronic Engineering and Electrical Engineering, seeking a **Ph.D. position** to advance research in the fields of **artificial intelligence** and **digital systems**.

Education

Amirkabir University of Technology *M.Sc. in Digital Electronic Engineering*   *Sept 2021 – Aug 2024*

- **GPA:** 19.21/20 - 4.0/4.0 - *First Rank*
- **Thesis:** Improving Wind Turbine Efficiency Using Parameter Prediction and Model Selection through Deep Learning in a Digital Twin Environment - *Supervisor: Dr. Saeed Sharifian*

Guilan University *B.Sc. in Electrical Engineering*   *Sept 2016 – Aug 2020*

- **GPA:** 17.95/20 - 3.87/4.0
- **Thesis:** System Controlling Using Sensors with a Controller and Mobile Application - *Supervisor: Dr. Shahbaz Reyhani*

Selected Courses

- Signals and Systems (20/20)
- Statistics and Engineering Probability (20/20)
- Machine Learning (20/20)
- Digital Circuit Design using VHDL (20/20)
- Data Analytics (19/20)
- Digital Signal Processing (20/20)
- Pattern Recognition (20/20)
- Data Mining (20/20)
- Big Data (18.75/20)

Awards and Honors

- **First Rank** in M.Sc. program at Amirkabir University of Technology.
- **Top 5%** in B.Sc. program at University of Guilan.
- **Ranked 54th** in university entrance exam for M.Sc. among ~10,000 candidates.
- **Tuition Waiver** for academic achievements in both bachelor's and master's programs.
- **Offered** Entrance Exam-Free Admission to the Ph.D. program at Amirkabir University of Technology.

Research Interests

- Artificial Intelligence
- Control Systems
- Energy Systems
- Signal Processing
- Cloud-Based AI Solutions
- Renewable Energy

Academic Experiences

Teacher Assistance   *Amirkabir University*

Supervisor: Dr. Saeed Sharifian   *Feb 2023 – Jul 2024*

- Assisted in teaching **Multimedia courses** for undergraduate students, focusing on image processing.
- Collaborated with the professor to **create slides and presentations** for lectures.
- Assigned and supervised **mini projects** and **final course projects** for students.
- Supported the professor in **evaluating and grading** students' final projects.

Laboratory Instructor   *Amirkabir University*

Supervisor: Dr. Sanaz Seyedin   *Feb 2022 – Jul 2022*

- Instructed undergraduate students in **Digital System 1 Laboratory** at Amirkabir University.
- Taught practical skills in **FPGA programming** and **VHDL language**.
- Guided students through **hands-on projects** to build and test digital systems.

Laboratory Manager   *Amirkabir University*

Supervisor: Dr. Saeed Sharifian   *Sep 2021 – Aug 2023*

- Managed and oversaw the **Pervasive Computing Laboratory** during my master's program.
- Coordinated with faculty members and facility managers to enhance **the laboratory environment**.
- Ensured the lab's resources were well-maintained and accessible for all members.

Teacher Assistance   *Guilan University*

Supervisor: Dr. Shahbaz Reyhani   *Feb 2019 – Jul 2019*

- Conducted review sessions for **Digital System 1**, clarifying key concepts for undergraduate students.
- Provided exercises on **logic circuits** and guided students in using **Proteus** for circuit design.
- Assigned and evaluated **practical projects**, supporting students in applying theoretical knowledge.

Work Experiences

Technical Team Lead   *Remote (Portland, OR)*

[Dealertower](#) ↗   *Jul 2024 – Present*

- Led **backend**, **frontend**, and **DevOps** teams to develop a cloud-based microservice architecture.
- Worked with various **CDNs** and **cloud providers** to enhance system performance.
- Assisted the CTO in **task distribution** and **project planning**.
- Created strategic roadmaps to meet company objectives efficiently.

Senior Backend-Developer   *Remote (Portland, OR)*

[Dealertower](#) ↗   *Jul 2022 – Jul 2024*

- Developed nearly **20 microservices and APIs** using FastAPI and Python.
- Ensured seamless **integration between microservices** on a cloud-based system.
- Utilized various **SQL and NoSQL databases** to optimize data management.
- Integrated with multiple **third-party APIs** to support high-traffic platforms.

Backend-Developer   *Free-Lancer*

Larateam   *Aug 2016 – Jul 2022*

- Developed various websites and platforms using **PHP (Laravel)**, including commercial systems.
- Collaborated with **UI/UX designers** and **frontend** developers to complete projects.
- Managed projects sourced from online platforms and professional **network connections**.

Selected Academic Projects

- **Developed a network intrusion detection system** using **deep learning** for the **Data Analytics course**, employing **Python** with libraries such as **TensorFlow** and **Keras** to create and train models capable of identifying potential security threats in real-time data streams.

- **Participated in database gathering for audio recognition** and implemented **emotion detection in text** and a **CAPTCHA resolver** using **CNN networks** in **Machine Learning courses**, utilizing **Python**, **TensorFlow**, and **scikit-learn** for data preprocessing, model training, and validation.

- **Created a chatbot** using **RNN networks and Transformers** on the **Microsoft Wiki QA Corpus** for the **Big Data Processing course**, leveraging frameworks like **TensorFlow** and **Keras** to build and fine-tune language models capable of understanding and generating human-like responses.

- **Completed projects** in **frequent pattern recognition**, **feature selection and extraction**, and **noise and outlier detection** for the **Data Mining course**, applying techniques using **Python**, **Pandas**, **NumPy**, and **scikit-learn** for effective data analysis and model optimization.

- **Developed an extended version** of the **River Raid Atari game** on an **FPGA board** for the **Designing Digital Systems using FPGA course**, implementing **VHDL** for hardware programming and utilizing **Quartus II** for synthesis and simulation of the design.

Programming Languages & Applications

Programming Languages: Python, PHP, MATLAB, VHDL
Data-Related Libraries: TensorFlow, Keras, Pytorch, NumPy, Pandas, PySpark
Other Libraries: Fast-API, SQLAlchemy, Selenium, Scrapy
Databases: SQL, Postresql, MySQL/MariaDB, SQLite
CI/CD: Git, Github
Applications: Proteus, LATEX, HSpice, Docker, Simulink, Microsoft Office
Operating System: Linux, Windows

Languages

English
- **IELTS:** Overall 7.0 (Listening 7.5, Reading 8.0, Writing 6.0, Speaking 6.0)

Persian
- **Mother Tongue**

References

- **Dr. Saeed Sharifian:** Supervisor, M.Sc. Program - sharifian_s@aut.ac.ir ☑

- **Prof. Karim Faez:** kfaez@aut.ac.ir ☑

- **Dr. Sanaz Seyedin:** sseyedin@aut.ac.ir ☑

- **Dr. Shahbaz Reyhani:** Supervisor, B. Sc. Program, Head of Department - shahbaz@guilan.ac.ir ☑

- **Dr. Arash Naghdehforooshha:** seyed.arash.n@aut.ac.ir ☑