Maedeh Dehghan

Shahid Beheshti University, Tehran, Iran

☐ +098 939 717 8698 • ✉ maedehdehghanam@gmail.com

🌐 maedehdehghan.ir • 🌐 github.com/maedehdehghanam

EDUCATION

Shahid Behehshti University   **Tehran, Iran**
Bachelor of Science in Computer Engineering   *Sep. 2020 to Jun. 2024 [Expected]*

- **Cumulative GPA: 18.27/20 (3.82/4)**
- **GPA of last two years: 18.81/20 (3.91/4)**
- Ranked **3rd** among 120 undergraduate students.
- **Relevant Courses: GPA: 4/4**

Algorithms Design	Compiler Design	Machine Learning
Artificial Intelligence	Operating Systems	Statistics & Probabilities
Advanced Programming	Computer Architecture	Microprocessor & Assembly language

Farzanegan1 High School   **Shiraz, Iran**
Diploma in Mathematics and Physics   *Sep. 2014 to Jun. 2023*

- Affiliated with the National Organization for the Development of Exceptional Talents (NODET).

RESEARCH INTERESTS

RESEARCH EXPERIENCE

TEACHING EXPERIENCE

Operating Systems   **Tehran, Iran**
Shahid Beheshti University   *Spring 2023*

- Under the supervision of **Prof. Moghaddam.**
- Designing programming assignments, giving quizzes, grading

Introduction to programming   **Tehran, Iran**
Shahid Beheshti University   *Since Fall 2021*

- Under the supervision of **Dr. Aliakbari**
- Designing programming assignments, grading, holding TA classes

Advanced programming   **Tehran, Iran**
Shahid Beheshti University   *Since Spring 2022*

- Under the supervision of **Dr. Aliakbari** and **Dr.Vahidi**
- Designing programming assignments, grading, holding TA classes

Electrical Circuits   **Tehran, Iran**
Shahid Beheshti University   *Since Spring 2022*

- Under the supervision of **Dr. Shekofteh**
- Designing programming assignments, grading, giving quizzes, Holding TA classes

Artificial Intelligence   **Tehran, Iran**
Shahid Beheshti University   *Spring 2023*

- Under the supervision of **Dr. Abdoos**
- Designing programming assignments, grading, Holding TA classes

WORK EXPERIENCE

High Performance Computing **Tehran, Iran**
Institute For Research In Fundamental Sciences (IPM) *Jun. 2023 to Sep. 2023*

- Under the supervision of **Dr. Rahmati**

SKILLS

- **Languages:** Python, Java, Golang, MATLAB, C/C++, Assembly, VHDL, System Verilog, HTML, CSS
- **DevOps:** Docker, Kubernetes
- **Tools and Libraries:** Git, Linux, Pandas, Numpy, Sikit learn, LLVM

PROJECTS

Laptop Price Prediction
Python, Selenium, Pandas, Numpy, Sikit learn

- This project is a machine learning project that predicts laptop prices based on data collected from torob.com.
- The project utilizes **data scraping techniques** to collect laptop specifications and corresponding prices from the website.
- The project utilizes **the K-Fold Cross Validation technique** to evaluate and improve the model's performance.

Multi-Cycle RISC-V Processor
System Verilog, ModelSim

- The project involves the design and implementation of a multi-cycle RISC-V processor.
- The basic state machine used in the project is a Moore machine that takes [6:0]op as input and produces sets of outputs.

Cross Word Solver
Python, Beautiful Soup, Pandas, Numpy, Sikit learn

- The Crossword Solver is an **NLP-based** crossword solver application that assists users in finding the most appropriate word category for a given inscription.
- **Category Database:** The Crossword Solver relies on the Farsnet database to retrieve various word categories in Persian.
- **Category Suggestions:** Given an inscription, the solver uses a Naive Bayes model to determine the most suitable category for the inscription
- **Constraint Satisfaction Problem:** The solver incorporates a Constraint Satisfaction Problem (CSP) approach to find the best member within a category that fits the given constraints.

Doodle Jump in Assembly x86
Assembly x86, DOSBox

- This project is an implementation of the popular mobile game "Doodle Jump" using **Assembly x86 programming language**.
- The game will be developed to run on the DOS operating system, using the DOSBox emulator for compatibility.

Signal Generator
C, Keil, Proteus Design Suite

- The purpose of this project is to implement the Signal Generator tool using the STM32 microcontroller.
- The system consists of two modules. One module has the task of communicating with the user, and the other module has the task of generating waveforms.
- These two parts are connected to each other using SPI protocol.

Scheduling Algorithms
Java

- In an operating system that uses paging for memory management, a page replacement algorithm is needed to decide which page needs to be replaced when a new page comes in. This project is a Restaurant Management System that utilizes scheduling algorithms to fit its customers in.

○ **SBUgram**
Java, JavaFX

- SBUgram is a Java-based application developed using Java and JavaFX with the aim of providing a platform similar to Instagram.
- It allows users to share photos, follow other users, like and comment on posts, and engage in a social media experience within a university community.

HONORS AND AWARDS

○ **Ranked 3rd** among 92 B.Sc students in Computer Engineering department, Shahid Beheshti University, 2023.
○ **Member of** Shahid Beheshti University Exceptional Talents Organization, 2020 - 2023.
○ **Ranked 590th**National entrance exam for B.Sc Studies among 160,000 students, 2020.
○ **Semifinalist** National Physics Olympiads, 2018 & 2019.
○ **Qualified** for National Organization for Development of Exceptional Talents (NODET) entrance exam, 2014.

LANGUAGES

○ **Persian:** Native
○ **English:** IELTS MOCK: 7.5 (Speaking: 6.5, Reading: 9.0, Listening: 8.0, Writing: 6.0)
○ **German:** Elementary (A2)

REFRENCES

○ **Prof. Mohsen Ebrahimi Moghaddam — Professor**
Shahid Behehshti University

- m_moghadam@sbu.ac.ir

○ **Dr. Sadegh AliAkbari— Assistant Professor**
Shahid Behehshti University

- sadegh.aliakbary@gmail.com

○ **Dr. Dara Rahmati — Assistant Professor**
Shahid Behehshti University

- d_rahmati@sbu.ac.ir

○ **Dr. Yaser Shekofteh — Assistant Professor**
Shahid Behehshti University

- y_shekofteh@sbu.ac.ir