

# Mohammadreza Amini



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## About

I am a passionate computer science student with a deep-rooted love for learning and teaching. My father, a dedicated professor, instilled in me a strong commitment to academia. My journey in computer science began early, and I'm captivated by the ever-evolving nature of the field. I chose computer engineering as my university major at one of the top universities in my country. Now, I am studying master of applied computer science here in Canada, and I'm looking for a research position to gain experience and knowledge. I'm interested in IoT, applied artificial intelligence, HCI, and software development.

## Education

sept 2023 - now GPA: N/A	<b>Master of Applied Computer Science</b> Concordia University
sept 2018 - feb 2023 GPA: 4.0 (18.23/20)	<b>Master of Bachelor of Computer Engineering (BSc)</b> Shahid Beheshti University
sept 2017 - june 2018 GPA: 4.0 (18.88/20)	<b>Mathematics &amp; Physics Pre-University</b> Nikan Pre-university School
sept 2014 - june 2017 GPA: 4.0 (18.95/20)	<b>Mathematics &amp; Physics Diploma</b> Nikan High School

## Skills

### Programming Languages

C, C++, Java, Python, MATLAB/Simulink, Solidity

### Web Development

HTML/CSS, Javascript, MySQL, React, Gatsby

### Operating Systems

MacOs, Windows, Linux ( Debian, Ubuntu, Raspbian )

### HDLs and Hardware Simulation and Synthesis Tools

VHDL, Verilog/System-Verilog, Modelsim, Proteus, Intel Quartus Prime, Xilinx ISE Design Suit

### Other IDEs, Softwares, etc.

IntelliJ IDEA, PyCharm, CLion, Keil µVision, Remix Arduino , Visual Studio Code, PlatformIO, Data Grip, Visual Paradigm, Cisco Packet Tracer, FreeRTOS, Git

### Languages

English: IELTS 7.5 | Writing: 6.5 Speaking: 7.5 Listening: 8.5 Reading: 7.5  
French: Limited working proficiency  
Persian: Native

## Experience & Work

mar 2023 - aug 2023  
Omid technologies inc  
Broadcast company

### Software engineer ( internship )

projects involving Linux, Python, Raspberry Pi, and other technologies, while also acquiring valuable skills in media technology and computer networks.

jul 2019 - mar 2020  
Zibal co  
Fintech company

### Front-end developer

Working as a member of react developers. Designing and implementing new internet presence for the company.

feb 2019 - jul 2019  
Zibal co  
Fintech company

### Front-end developer ( internship )

Working with react and learning how to act as a developer team member. Getting familiar with server-side programming and UI/UX.

june 2022 - sept 2022  
Freelance

### Freelance full-stack developer

Seasoned freelance developer and graphic designer specializing in crafting diverse websites, from e-commerce storefronts to captivating portfolios.

sept 2019 - jul 2021  
Shahid Beheshti University

### Teaching assistant of core and elective courses

Teaching tutorials in class, designing assignment problems, designing course project, assignment Grading for courses like artificial intelligence and expert systems, principles of algorithms, data structures, systems analysis and design, etc.

## Honors & Awards

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### Ranked in top 1%

among 350,000 participants in national entrance exam for state universities in Iran in 2018.

### Scoring A+ & Top Student

Bachelors courses: Artificial intelligence and expert systems | Electrical circuits | Systems analysis and design | Principles of algorithms | Signals and systems | Operating systems | Microprocessors and assembly language | Computer aided digital system design | Internet engineering | embedded and real time systems | Computer simulation

### Candidate for the best Computer Engineering BSc thesis

Shahid Beheshti University

## Personality

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As a researcher, I thrive in the dynamic world of research, where tackling complex challenges fuels my spirit, and my dedication to achieving the best in every endeavor motivates me to push myself.

Beyond research and work, I find joy in physical fitness, hiking, and extending a helping hand to others. In addition, I enjoy flipping through magazines like Forbes and other publications, always hungry for fresh insights.

# Recent Projects

more on github

## Implementation of an AI-enhanced VOIP system on a raspberry-pi board

Implementing a VOIP-based (Voice-Over-IP) telephony system on a raspberry-pi board and enhancing the system with machine learning and audio-related AI algorithms in order to gain more functionality and creating new features ( focusing on performance optimization ) .

## Image Processing and Filtering using 2D-Convolution

Using 2D-Convolution in order to achieve different image filters and extracting visual features for deep learning.

## Complex Networks and Network Robustness Simulation

Investigating the robustness of the networks against static and dynamic failures.

## CCNA Projects For Network Laboratory Course

Implementing sample projects and tutorials for different levels of students in this course at Shahid Beheshti University.

## Arm Cortex M4 Projects Using STM32F401RE

Implementing sample projects and tutorials for different levels of students at Shahid Beheshti University.

## Design and Implementation Of A Compiler

Implementing and designing a compiler for specific programming language.

## Assembly Tetris Game

Implementing tetris game using 8086 assembly and dosbox.

## 32-bit Integer Unit Data Path and Controller

Implementing a 32-bit integer unit data path and controller using VHDL.

## AI Quoridor Game Agent

The intention was to create an AI-agent which has the ability to compete against human opponent.

## Blockchain and Cryptocurrency Projects

Related projects like smart contracts, tokens, NFTs, public and private key generator, and cryptography systems implemented with Solidity & Python.

## Angry Birds Game & Jetpack Joy Ride Game

Implementing Angry Birds Game with unity game engine and Jetpack joy ride game with C++ .

# References

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## Dr. Hassan Haghighi

Professor - Faculty of Computer Science & Computer Engineering, Shahid Beheshti University  
email: h\_haghighi@sbu.ac.ir

## Dr. Dara Rahmati

Assistant professor - Faculty of Computer Science & Computer Engineering, Shahid Beheshti University  
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## Dr. Alireza Shameli-Sendi

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