

SEPEHR MADANI

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Education

Dec 2022

B.Sc. in Computer Science (GPA: 3.98/4.0) (credits: 84/120)

University of Massachusetts Lowell, Lowell, MA Honors College

- Related Courses: Object-Oriented Programming, Data structures and Algorithms, Programming Languages, Assembly Language, Computer Architecture, Discrete Structures I & II, Linear Algebra I & II

Skills

Programming: C, C++, Python, PyQt5 / PySide2 **Computer Calculation:** Wolfram Mathematica, MATLAB

Academic Projects

Pascal Compiler (Honors College Project) (2020—)

- Designing and implementing a compiler front-end for the Pascal language

Nulli-fi (2020) ([GitLab repo](#))

- Created and maintained a Python package for testing different algorithms on nulling systems for mmWave wireless LANs using phased arrays
- Assisted master's candidate by implementing the genetic algorithm for finding nulls
- Designed a GUI tool using Qt for performance analysis of the proposed nulling algorithms

ONR (Optical music Note Recognition) (2015 – 2016)

- Built a MATLAB-based project to recognize musical notes from scanned music sheets to assist in note-reading

Experience

English Tutor, *Watertown Public Library (Project Literacy)*, July 2020 – present

- Tutored ESOL adults in Mathematics and English subject to pass the HiSET test and TOEFL test
- Designed customized lessons based on each student's knowledge

Peer Tutor for Mathematics Olympiad, *Allameh Helli High School, Tehran, Iran*, 2017

- Tutored the sophomore Math Olympiad students via problem-solving classes
- Drafted and compiled a standardized geometry reference booklet of lectures and problems for students

Honors and Awards

- Accepted into UMass Lowell Professional Co-op Program, 2020.
- UMass Lowell Honors College Fellowship Award, 2020.
- Iranian Scholarship Foundation Undergraduate Scholarship Award, 2020.
- International Student Scholarship Award at UMass Lowell, 2019 and 2020.
- First-year Dean's list for Computer Science, 2019.
- Second Prize in [Iran's National Mathematics Olympiad](#) (Silver Medal), 2017.
- Fellowship of the [Iran's National Elites Foundation](#) since 2017.