Soheil Sepahyar

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Education

Spring 2019	PhD in Computer Science Michigan Technological University. Houghton. Michigan. USA
	GPA: 3.5/4 via 15 credits
Fall 2014 – Spring 2018	Bachelor of Science (B.Sc.) in Computer Software Engineering. Azad University of Central Tehran Branch *Tehran*. Iran Specialized in Computer Software Engineering
	GPA: 18.70/20 or 3.84/4 (2016- 2018) , 18.28/20 or 3.74/4 (overall) via 146 credits

Research Interests

- Algorithm
- Computer Graphics
- Deep Learning
- Machine Learning
- Artificial Intelligence
- Computer Animation

Honors and Certificates

- ❖ C++ Core Certificate from Tehran Institute of Technology (Feb 2015)
- ❖ Linux Essential at IAUCTB IEEE
- ❖ Teaching C++ Programming
- ❖ CITI Training (Human Subject Research (Feb 2019 – Feb 2022))
- ❖ CITI Responsible Conduct of Research (RCR)

Research Experience

Fall of 2019	**Graduate Teaching Assistant,** Introduction to programming Languages. Michigan Technological University, Houghton, Michigan, USA
Spring & Summer & Fall of 2019	**Graduate Research Assistant**, Working on distance judgment in Virtual Reality with team at the Michigan Technological University. Under supervision of Dr. Scott. Kuhl. Michigan Technological University, Houghton, Michigan, USA
Spring of 2019	**Graduate Teaching Assistant,** Computer Organization. Under The supervision of Dr. David. Whalley. Michigan Technological University, Houghton, Michigan, USA
Summer 2017	**Teaching Assistant** , *Working on **robotic** team of Azad University of Tehran Central Branch for global competition, Robotic LAB, under* *The supervision of Dr. Sh. Javadi* , Azad University of Tehran Central Branch ,Tehran, Iran.
Spring 2017	**Research assistant**, *Formal Verification in Distributed Systems, under* *The supervision of Dr. P. Asghari,* Azad University of Tehran Central Branch, Tehran, Iran.

Publications

Fall of 2019	***Effects of Brightness on Distance Judgments in Head Mounted Displays*** *(Currently under submission process)*
Summer 2019	***Comparing Four important Sorting Algorithms with Different Data Sizes Based Upon the Time Complexity*** (Accepted by 2019 2nd International Conference on Algorithms, Computing and Artificial Intelligence (ACAI 2019))

Projects

Microprocessor Simulation Projects:

March 2017 – May 2017 (Microprocessor)	Project description: In these projects I have worked with Atmega32 and Atmega16 Atmel, Codevision and Proteus program for simulation the microprocessors program. Some of projects consisted of these topics and works together:

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- SPI
- ADC Temperature
- USART
- PWM

- LCD
- DC Motor
- BCD 7Seg
- Counter

March 2017 (Advanced Computer Graphic)	**Creating a Particle System for animations with OpenGL:** Project description: This Project, I implemented Particle Program with Object Oriented attributes and also read a lot of resource and paper for its implementation. The goal of this project is knowing particle system better and learn how to create big amount of objects. In Particle system we can produce millions object at the same time.
May 2017 (Database system and Software Engineering I)	**Creating the ER Diagram and database project for a Virtual Store:** Project description: In this project I designed database system for a virtual store (for example Amazon) by creating the ER Diagram and also draw Class Diagrams, Sequence Diagrams and Collaboration Diagrams for this project with Rational Rose Software.
May 2016 (Data Structure)	**Operations in Binary Search Tree (BST) Structure:** Project description: This Project had been created for better learning in Algorithm and Data Structure. Using binary search tree is very important for using operation like Insertion, traversing (Inorder, Preorder, Postorder) or even deleting a node. Behaviors of BST should be inside the nodes even if we deleted some nodes.
Apr 2016 (Computer Graphic)	**OpenGL 2D and 3D Modeling and Animating:** Project description: An Intro to OpenGL was started with a great 2D and 3D projects with basic shapes (Teapot, cones, Torus) and flower 2D animation and vase and butterfly 3D animation.
Apr 2016 (Data Structure)	**Implementation Linked list program:** Project description: In this project I had wrote the program with C++ Which create a linked list for saving students information. The program can Insert, Delete, Change and Sort Student's information.
March 2016 (Digital Design)	**Creating the real physical watch with Gates and Logics IC:** Project description: In this project I had worked with physical Logic gates and 7Segments to create a real watch for my Logic Circuit course. In this project, I had used Counter IC, 7Segment Decoder, and IC 555 for producing the Pulse, Breadboard, Resistors, etc.
Dec 2015 (Data Structure)	**Implementation Sorting Algorithms in a graph for Time Complexity:** Project description: In this project I implemented famous sorting algorithm e.g. (Bubble sort, Insertion sort, Quick sort, Heap sort and Binary Insertion sort…) to learn Time Complexity of each Algorithms.

Teaching Experiences and Conferences in Class

Spring of 2018	**Advanced C++ Programming at Islamic Azad University of Central Tehran Branch** In this program, I introduced Object Oriented Programming (OOP) to freshman students at University and cover some of advanced programming subjects (Dynamic Array, classes, Objects, Variable Scope, Pointers, etc.) to students for their final exam.
Spring 2017	**Deep Learning Conference in** **The way of providing scientific and technical content class:** In this conference in explain about Deep learning. I had explained how CNN's and RNN's works. Also I had created a class paper for this project.
Fall 2016	**Convolutional Neural Network Conference in my AI class:** In this project, I had study deep learning for the first time by myself. By working on this project I've got the basic knowledge of CNN's. I worked on "**Tiny ImageNet Visual Recognition Challenge**" paper by *Hadi Pouransari, Saman Ghili* which was their report of case study in Stanford university. I was a leadership of the team to give a conference in the class. The output of this conference project give a lot of information to me. I had thought this topic with its content to my team and student class in this conference.

Voluntary Experiences

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member of IEEE student branch at Azad University of Tehran Central Branch
Teaching C++ Programming

Computer skills

Programming	C++, Java(Core) , Android Programming Assembly Language, Perl , JavaScript (Familiar)
Development Tools	**Autodesk Maya**, CodeVision AVR (ATmega 32 Programming) , Proteus, IntelliJ IDEA ,Microsoft Office, **Realflow**, Photoshop, Android Studio (Expert) Arduino, NodeMCU, Raspberry pie (Familiar)
Operationg Systems	Windows, Linux

Major Course Grades

- **Artificial Intelligence: 20/20**
- **Algorithm: 19/20**
- **Data Structure: 20/20**
- **Discrete mathematics: 20/20**
- **Fundamental Programming: 20/20**
- **probability and statistics for engineering: 18/20**
- Numerical calculation methods: 19/20
- Differential Equation: 19/20
- Calculus II: 20

- **Computer Graphic I (Basic) : 20/20**
- **Computer Graphic II (Advanced): 20/20**
- Storage-and-retrieval: 19.5/20
- Database Design: 20/20
- **Immersive Virtual Environment: 4/4**
- Computer Architecture : 19/20
- Microprocessor: 19.5/20
- **Theory of Machine and Language: 20/20**
- **Operating Systems: 20/20**

Language Skills

Persian (Native)
English (Excellent)
Arabic (Basic)

Hobbies

Reading ,Drawing Concepts and 3D animations, Soccer ball, Running, TV Series, Music, Parkour

References

Dr. Reza Vaziri Yazdi
Email: rez.vaziri@iauctb.ac.ir
• Address: Azad University of Tehran Central Branch, Tehran, Iran

Dr. Parvaneh Asghari
Email: par.asghari@yahoo.com
• Address: Azad University of Tehran Central Branch, Tehran, Iran

Personal Information

• Nationality: Iranian

• Birth Date: November. 25, 1995

• Place of Birth: Tehran, Iran