

Module One Journal: Self Introduction

Hector Maldonado

Southern New Hampshire University

CS-499: Computer Science Capstone

Professor Ramsey Kraya

8/14/2025

## **Module 1-1 Journal: Self-Introduction**

This paper is an informative self-introduction related to the computer science course concepts as they apply to my personal and professional experiences. It is about sharing personal opinions and viewpoints and engaging with course concepts and materials in a deeper, more reflective way.

### **Prompt**

My professional journey has been shaped by a commitment to service, adaptability, and a passion for technology. Before entering the field of computer science, I served as an Emergency Medical Technician (EMT) for the Fire Department of New York (FDNY). My time as an EMT was both challenging and rewarding, requiring quick thinking, teamwork, and the ability to remain calm under pressure. These experiences taught me the value of vigilance, responsibility, and effective communication, qualities that have continued to guide me throughout my career.

After being vested with FDNY, I transitioned into hospital security, where I currently serve as a team lead. In this role, I have further developed my leadership skills, overseeing daily operations and ensuring the safety of patients, staff, and visitors. Working in a hospital environment has reinforced my ability to adapt to rapidly changing situations and to collaborate with professionals from diverse backgrounds.

Driven by a lifelong interest in technology and problem solving, I decided to pursue formal education in computer science. I first earned an Associate's degree in Computer Science with a focus on Software Engineering, and I am now completing my Bachelor's degree at Southern New Hampshire University, specializing in Data Analytics. Throughout my studies, I have gained hands on experience with programming languages such as C++, Java, Python, and SQL, as well as tools like OpenGL and various database systems.

My academic journey has provided me with a strong foundation in algorithms, data structures, and the software development life cycle. I have worked in agile teams, taking on roles as a developer, tester, project manager, and team lead. These experiences have enhanced my collaboration, problem solving, and organizational skills, allowing me to approach complex challenges with confidence and creativity.

A highlight of my academic work is the development and enhancement of a 3D Scene Manager application in C++ and OpenGL, which serves as the primary artifact in my ePortfolio. Through this project, I have demonstrated growth in software design and engineering by modularizing resource management, in algorithms and data structures by implementing an octree for efficient spatial

partitioning, and in databases by integrating JSON-based save and load functionality. These enhancements reflect my commitment to building scalable, maintainable, and user friendly software solutions.

Outside of my academic and professional pursuits, I enjoy hobbies that challenge my creativity and strategic thinking, such as playing Magic: The Gathering, guitar, and video games. I am also exploring the world of 3D printing, which has further fueled my interest in the intersection of technology and hands on creation.

Looking ahead, I am eager to leverage my skills in software engineering and data analytics to contribute to innovative projects and solve real-world problems. I am confident that my unique blend of technical expertise, leadership experience, and dedication to lifelong learning will enable me to make a meaningful impact in the field of computer science and beyond.