CS 499

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**Professional Self-Assessment**

As I approach the culmination of my Computer Science degree, I look back on a journey filled with technical growth, strategic pivots, and an ever-deepening passion for building intelligent, practical solutions. The capstone experience and the development of this ePortfolio have served not only as milestones but also as meaningful reflections of my transformation into a computer science professional.

Over the course of the program, I’ve developed a comprehensive foundation across software engineering, data structures, algorithms, and databases—all of which are showcased in my ePortfolio. My work on the *YourWeightHero* Android app, for example, illustrates my proficiency in building mobile applications from scratch, incorporating user authentication, SQLite database integration, and features like SMS notifications and UI validation. These enhancements were driven by my desire to create user-centered, responsive, and secure software systems, aligning closely with industry standards and best practices.

Beyond technical development, my coursework helped solidify my long-term professional focus: becoming a machine learning engineer. Initially, I entered the program interested in general software development, but as I engaged with machine learning, artificial intelligence, and database design, my career goals evolved. I now aspire to design systems that not only function well but learn and adapt intelligently. This is supported by additional skills I’ve cultivated—such as applying algorithmic logic in custom sorting implementations and optimizing query performance for MongoDB in full-stack applications.

Collaborating in team environments was another key part of my academic development. Whether working on team-based projects or through code reviews, I learned to communicate effectively with peers, take constructive feedback, and work iteratively toward shared goals. In real-world settings, this skill is vital for agile development workflows and cross-functional team success. Communicating with stakeholders was also emphasized through technical documentation, user stories, and clear visual interfaces—tools that bridge the gap between developers and non-technical audiences.

Security, too, has remained at the forefront of my work. From refining login workflows in mobile apps to introducing role-based access control (RBAC) in a MongoDB dashboard, I’ve prioritized secure practices across development cycles. I now approach projects with a security-first mindset—anticipating vulnerabilities, validating inputs, and implementing safe data handling procedures.

This ePortfolio represents the culmination of those efforts, with each artifact highlighting a core aspect of my expertise:

* **Software Engineering and Design:** YourWeightHero Android App – showcasing secure login, UI/UX refinement, and feature enhancement
* **Algorithms and Data Structures:** Custom Sorting Algorithms and Binary Search Tree implementation – demonstrating optimized logic and edge-case handling
* **Databases:** YourWeightHero with SQLite and Grazioso Salvare MongoDB Dashboard – reflecting efficient data management, query optimization, and data visualization

Together, these artifacts tell a coherent story of a developer who is adaptable, thoughtful, and technically capable. They reflect my ability to analyze problems, design effective solutions, and deliver polished, user-friendly software across platforms.

In closing, this self-assessment and the accompanying portfolio demonstrate my readiness to enter the field of computer science—not just as a developer, but as a motivated, security-conscious, and forward-looking engineer with a clear focus on machine learning and AI. I look forward to applying these skills in a real-world setting, continuously learning, and contributing to innovative, meaningful solutions.