

Professional Self-Assessment

Danielle Hoopes

Southern New Hampshire University

Author Note

This document is a detailed reflection of the author's experiences in the Computer Science Program at Southern New Hampshire University. This self-assessment communicates the effect of coursework in the varying fields of CS as they apply to professional goals and values.

Table of Contents

Professional Self-Assessment	3
Using Git and Code Reviews: Collaboration and Team Environments	3
Stakeholder Communication: Project Management	3
Data Structures and Algorithms	4

Professional Self-Assessment

Throughout my coursework I have had the opportunity to experience the varying topics inclusive to a professional career and capacity in Computer Science. I have built a skillset and knowledge base that affords me a distinct view of the ways in which technology can solve problems, build businesses, and better the world. Through each course at Southern New Hampshire University I was pushed not only to learn, but to understand that what I was learning effects technology and the businesses who rely upon it.

Using Git and Code Reviews: Collaboration and Team Environments

Version control tools such as Git have revolutionized the way that developers manage their code, giving them the ability to work in synchrony, track every change, and create security around production. During my work in this course, my team and I worked on several coding projects through Eclipse and BitBucket. These collaborations included code reviews, unit testing, branching, merging, commit, and the use of history and newsfeed tools to monitor development status' and changes. Through these interactions, I learned to write my code with the knowledge that it would be reviewed. This knowledge results in better, well-documented code.

Stakeholder Communication: Project Management

Communicating to stakeholders is an integral part of becoming a well-rounded professional in the field of Computer Science. Purposeful communication is most effectively achieved by intense planning and consistency. There are tools used in project management that

assist in demonstrating that the goals and expectations of the stakeholders align with the project properly. Project status reports, stakeholder's meetings, daily standup meetings are just some of these tools that can relay the progress to every stakeholder in the project. Acting as the project manager, I have experience in turning the goals of the stakeholders into plans that organize individuals into a cohesive team of developers, analysts, and management roles that keep the stakeholder's informed.

Data Structures and Algorithms

Data structures and algorithms are the backbone of every system that we use today. Topics studied such as vectors, hash tables, sorting and searching, and stacks and queues are powerful tools that store and retrieve data and set instructions that help us solve real-world problems. In a professional setting, manipulation of data through efficient structures and algorithms is a key asset.

Software Engineering & Database

Software engineering has many facets such as UX/UI design. Engineers now more than ever are expected to design and implement their code with the user in mind. Tools such as prototypes assist in low-risk testing of products before unnecessary resources are spent building something that does not satisfy the needs of the user. My experience with prototype implementation through wireframes, user research, usability testing. This experience has shown me the steps to create a user-friendly product while maximizing resources.

Data is gaining more importance than ever before. Data mining is complex and is more than just using software to draw up a conclusion. It is about asking the right questions and

interpreting the data in a way that is useful to its owner. With the added benefit of data analytics, businesses now have access to a whole new level of intelligence, and systems that capture any and all types of data that they would need to make decisions. Through my work in data mining and analysis, I was able to clean and represent data in a way that was meaningful and find solutions to business problems such as decreased revenue. Having the ability to draw conclusions from data provides great insight into user sensibilities and patterns that result in better more far-reaching products.

Security

Each discipline I have studied has an aspect of security. From software development and design to database, every piece of code should be built with caution in mind. As the world becomes more digitized it's users are more at risk for attacks that take their information and harm their machines. As developer's we should always seek to secure our code, and reduce security liabilities. SQL validation, hashing and salting passwords, and API authorization are just a few of the tools that I use to secure my code.

Artifacts

My portfolio contains three separate practical examples of my work that demonstrate my abilities in the fields of algorithms and data structures, software design and development and

databases. Each of these elements form a travel site that I have enhanced from my previous work at Southern New Hampshire University. Each technical element implements many of my aforementioned skills into one polished artifact.