MODULE 4-1 JOURNAL:

CAREER CHOICE AND ARTIFACT UPDATE

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Module 4-1 Journal: Career Choice and Artifact Update

This paper reflects on our career choice and plans for the future due to the Computer Science program. A recall of why we have remained more consistent in our career plans and how our thinking about our career has evolved. We comment on some research conducted about our career choice and how this has impacted our thinking (Southern New Hampshire University, 2022).

Prompt

We started in our Computer Science Program in 2018, having studied in the program for as long as five years. We decided to join the program to improve our background in the programming and development of applications and web services. This effort to enter the program was motivated by our passion for working with computers, performing web development projects and programming in Python and Javascript languages, leading and implementing IT infrastructures projects, and giving technical support during our years of practicing Architecture.

We consider the Computer Science Program to add a formal theoretical and mathematical underpinning of computing background to our experience and get a degree that can help to demonstrate our proficiency and skills in the industry. Immersed in the CS program, we acknowledge the variety of electives and specializations in computer programming, software engineering, computer hardware, and artificial intelligence engineering (Computer Science Org, 2022). Computer science allows us to choose from so many areas that we need to focus on to work in the area we most enjoy. We consider a career choice in software engineering from these areas of specialization, but we are also interested in software development. As software engineers, we can apply engineering principles and systematic methods to develop programs and operate data for computers (Computer Science Org, 2022).

Because we get a formal education in design concepts and project creation, a career in software engineering allows us to be participative in designing software programs, analyze and design whole software systems, and often participate in the details of their development (Computer Science Org, 2022). Notably, this demonstrates that the daily tasks of the career vary widely. As software developers lead and carry out the creation of the software itself, like software engineers, we often look to participate in the software development and get continuous learning from it.

The computer science program opened our knowledge and prepared us with the abilities to work with major programming languages that are crucial to our career choice. The JAVA programming language, without recompilation, can produce software on multiple operating systems, including Mac OS or Windows. The SQL language is known as Structured Query Language, on which we can create SQL queries to execute CRUD functionalities for the manipulation of data and relational database management. The C++ language is a general-purpose and object-oriented programming language that uses both low and high-level language. With the C++ language, we can primarily manipulate text, numbers, and other computer-capable tasks.

Furthermore, one of our favorites, Python, is a high-level programming language that contains dynamic semantics, structures, typing, and binding that connect existing components (Computer Science Org, 2022). Like BASIC language in the '70s, we love that the Python syntax is easy to learn with no compilation stage involved, reducing program maintenance and enhancing productivity (Computer Science Org, 2022). It is a language that supports module and package use, which allows using the language for varying projects.

Currently, employment options for software engineers remain robust in a variety of industries with diverse career opportunities. Applications and web development have evolved dramatically, making it one of the specialties that we wish to explore. Being a software engineer opened us to confer with system programmers, analysts, and other engineers to extract pertinent information for designing systems, projecting capabilities, and determining performance interfaces (Computer Science Org, 2022). It allows to analyze user needs, provide consultation services to discuss design elements, and coordinate software installation.

Now that we look into finishing studying, we keep more consistent with our career plans. They have impacted our thinking and abilities in a way where we can work on multiple tasks at once or parts of a larger project. Split our attention across different modules of the same project, or switch easily between projects when working on a deadline or meeting team needs. It increases our organization and attention to detail when handling multiple projects. Keep track of further information with the ability to focus, allocate mental and physical energy to a task, and efficiently manage time and space with efficiency, quality, and proficiency (Computer Science Org, 2022). Troubleshoot coding issues and bugs as they arise and keep track of intricate details surrounding multiple ongoing projects (Computer Science Org, 2022).

After graduation, we look to start with an entry-level software engineer position that takes us in various roles that help to expand our abilities and skill in real projects. An entry-level position could allow us to work with a team where we can focus on the back end of a piece of software and build the specific code flow or on the front end to ensure that the user interface stays consistent (Computer Science Org, 2022). It can introduce us to the experience where we have to report progress to a supervisor, explain a product to a client, or coordinate with team

members via email, phone, and in-person meetings. We may also focus on quality assurance testing, a part of our constantly embracing career.

Artifact Update

Tracking progress and instructor updates on our progress in the artifact's enhancement implementations and ePortfolio development within each key category for the ePortfolio.

Status Checkpoints		Software Design	Algorithms	Databases
1	Artifact Selected	CS360 – Inventory App	IT145 – Zoo Monitor System	CS340 – Salvare Search Web App
2	Working on Initial Enhancement	➢ Complete forgot password feature in LoginActivity. ➢ Complete coding on ItemActivity user CRUD features. ➢ Complete SQL handle file refactor. ➢ Complete general code cleaning. ➢ Complete testing of code.	➢ Complete pseudocode development. ➢ Complete coding module for animals monitoring. ➢ Complete coding module for habitats monitoring. ➢ Complete updating library and code to work with Java 17. ➢ Complete testing of code. ➢ General code cleaning.	➢ Complete setting local Windows environment. ➢ Complete testing functionality of interface with python libraries and framework. ➢ Setup of MongoDB database. ➢ Testing code.
3	Submitted: Awaiting Instructor Feedback	Submitted and feedback received.	Not started	Not started
4	Working on Final Enhancements	Adding an overall comment about JAVA code files functionality.	Not started	Not started
5	Uploaded to ePortfolio	Formating narrative for ePortfolio home page and description page for the artifact.	Not Started	Not Started
6	Finalized ePortfolio Entry	Formating ePortfolio content.	Arrangement of GitHub page layout per wireframe	Arrangement of GitHub page layout per wireframe

References

Computer Science Org. (2022, March 18). *How to Get a Job in Computer Science*. Retrieved from Computer Science Org: https://www.computerscience.org/resources/jobs-in-computer-science/

Computer Science Org. (2022, March 17). *Software Engineer*. Retrieved from Computer Science Org: https://www.computerscience.org/careers/software-engineer/

Computer Science Org. (2022, March 17). *Top Careers in Computer Science*. Retrieved from Computer Science Org: https://www.computerscience.org/careers/

Southern New Hampshire University. (2022, March 21). *Module 4-1 Journal: Career Choice and Artifact Update*. Retrieved from Module Four: Computer Science Industry Careers and Opportunities: https://learn.snhu.edu/d2l/le/content/1014915/viewContent/17247448/View