Abigail Sibazeu

CS-499

02/02/2025

Journal Entry: Career Choice and Artifact Update

Part One:

1. **Have you changed your career plans? If so, what prompted this change? If not, why have you remained with your original plan?**

My career plan has remained consistent throughout my time in the Computer Science program. From the beginning, I was drawn to data science due to its combination of analytical problem-solving, statistical modeling, and programming. The ability to extract meaningful insights from data and apply them to real-world decision-making has always fascinated me. As I progressed through my coursework, my passion for data science only grew stronger, confirming that this is the right career path for me.

1. **How has your thinking about your career evolved?**

Initially, I viewed data science as primarily working with machine learning models and large datasets. However, as I gained more experience, I realized that it encompasses a broader spectrum of skills, including data cleaning, visualization, and communication. I have also developed a deeper appreciation for the ethical implications of data science, such as bias in algorithms and data privacy concerns. This evolution in my understanding has motivated me to continuously improve my technical and analytical skills while also focusing on the impact of data-driven decisions.

1. **Have you completed any research about your choice of career? How has this impacted your thinking? Have you thought about seeking an advanced degree or certification after earning your undergraduate degree?**

Yes, I have conducted extensive research on data science career paths, industry trends, and required skills. This research has solidified my decision to pursue a career in data science and has helped me identify key areas of focus, such as Python, SQL, machine learning, and big data technologies. Additionally, I have looked into the benefits of certifications like AWS Certified Data Analytics and Google Data Analytics. Given the competitive nature of the field, I have also decided to pursue a master's degree in data science to further strengthen my expertise and improve my career prospects.

1. **Which course outcomes have you achieved so far, and which ones remain?**

Throughout the Computer Science program, I have gained proficiency in programming languages such as Python and Java, strengthened my understanding of algorithms and data structures, and developed skills in data visualization and machine learning concepts. I have also worked with databases, statistical analysis, and foundational principles in software engineering. However, there are still important areas to explore as I complete my final courses. **CS465 (Full Stack Development)** will help me understand how to integrate front-end and back-end development, which is beneficial for building data-driven applications and dashboards. **CS350 (Emerging System Architecture and Technology)** will allow me to learn about modern computing architectures, cloud computing, and distributed systems, which are highly relevant in data science for managing and processing large-scale data efficiently. Mastering these topics will enhance my ability to design scalable and effective data-driven solutions.

Part Two:

|  |  |  |  |
| --- | --- | --- | --- |
| **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. | Submitted | Not started |
| **4** Working on Final Enhancements | Adding an overall comment about JAVA code files functionality. | Not started | Not started |
| **5** Uploaded to  ePortfolio | Formatting narrative for ePortfolio home page and description page for the artifact. | Not Started | Not Started |
| **6** Finalized ePortfolio Entry | Formatting ePortfolio content. | Arrangement of GitHub page layout per wireframe | Arrangement of GitHub page layout per wireframe |

Reference:

* Provost, F., & Fawcett, T. (2013). Data science for business: What you need to know about data mining and data-analytic thinking. O'Reilly Media.
* McKinney, W. (2017). Python for data analysis: Data wrangling with Pandas, NumPy, and IPython (2nd ed.). O'Reilly Media.
* Muller, A. C., & Guido, S. (2016). Introduction to machine learning with Python: A guide for data scientists. O'Reilly Media.
* Kaggle. (2022). *Kaggle: Your machine learning and data science community*. Retrieved from <https://www.kaggle.com>
* Glassdoor. (2023). *Data scientist salary trends and career insights*. Retrieved from https://www.glassdoor.com/Salaries/data-scientist-salary-SRCH\_KO0,14.htm