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Southern New Hampshire University

CS-499 Computer Science Capstone

Professor Kraya

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**Module Three Journal**

An ePortfolio is a strategic tool for self-promotion, particularly when transitioning into technical fields such as software engineering, simulation, or computer graphics. A well-structured ePortfolio allows me to demonstrate my ability to implement optimized rendering pipelines, use advanced graphics techniques, and align with professional standards. It acts as a tangible representation of my skills, showcasing real-world problem solving and technical growth over time (Lorenzo & Ittelson, 2005).

To maximize the marketing potential of the ePortfolio while minimizing risks, I’ll ensure all code and assets are either self-developed, open-source, or properly licensed. Using GitHub allows version control and public transparency while still offering privacy controls when needed. I also plan to document work carefully to prevent unauthorized use, while still sharing meaningful insights that demonstrate capability (Cambridge, 2010).

Despite the benefits, publishing original code and designs online does carry risk. Potential misuse or unauthorized redistribution of intellectual property is always a concern. Additionally, if poorly curated, an ePortfolio could reflect outdated or subpar work, diminishing credibility instead of enhancing it (Scully, O'Leary, & Brown, 2018). This is why intentional organization and reflective writing are essential.

At this point in the course, I’ve made solid progress toward several outcomes, including designing computing solutions using appropriate algorithmic principles and applying best practices in software engineering. I’ve also begun demonstrating my ability to integrate collaborative, technically sound documentation. Outcomes still in progress include finalizing security-related considerations and implementing robust database solutions. These will be addressed through the remaining enhancements.

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| **Checkpoint** | **Software Design and Engineering** | **Algorithms and Data Structures** | **Databases** |
| **Name of Artifact Used** | OpenGL 3D Scene Project – Charcuterie Board (from CS-330) | OpenGL 3D Scene Project – Same artifact planned | OpenGL Breakout Game – High Scores/Multiplayer |
| **Status of Initial Enhancement** | Currently in progress. Focusing on dynamic lighting integration (directional + point sources), realistic shading, and scene complexity expansion. Expected to complete initial enhancement tonight. | Not yet started. Will begin after the SDE category is finalized. | Not yet started. Planned for after Algorithms category. |
| **Submission Status** | Enhancement plan submitted. Artifact updates and improvements are underway with a goal to finish and submit within the next 24–48 hours. | Not yet submitted. | Not yet submitted. |
| **Status of Final Enhancement** | Not yet started—awaiting completion of initial enhancement. Once all lighting and texturing improvements are validated, final polishing and documentation will begin. | Not started. | Not started. |
| **Uploaded to ePortfolio** | Not yet uploaded. GitHub Pages repository is set up and will be used to host the enhanced artifact. | Not applicable at this stage. | Not applicable at this stage. |
| **Status of Finalized ePortfolio** | ePortfolio structure is in place. Software Design and Engineering section is being drafted. Full updates will follow after enhancement completion. | Pending. | Pending. |

**References**

Cambridge, D. (2010). *Eportfolios for lifelong learning and assessment*. Jossey-Bass.

Lorenzo, G., & Ittelson, J. (2005). *An overview of e-portfolios*. EDUCAUSE Learning Initiative. https://library.educause.edu/resources/2005/1/overview-of-eportfolios

Scully, D., O'Leary, M., & Brown, M. (2018). The learning portfolio in higher education: A game of snakes and ladders. *Assessment & Evaluation in Higher Education*, 43(3), 434–448. https://doi.org/10.1080/02602938.2017.1356906