5-1 Journal: Computer Science Trends and Artifact Update

Ryan Summers

Southern New Hampshire University

CS-499-13167 Computer Science Capstone

Professor Gene Bryant

April 6th, 2025

**Part One: Trends**

There is a new type of coding emerging, vibe coding. It is basically “building software with an LLM without reviewing the code it writes.” (Willison, n.d.) Vibe coding has the potential to change the way programmers code. They will rely less on their knowledge of code, and more on their knowledge of how the code works. It has the potential to eliminate a lot of jobs if it ever really takes off. Currently these AI assisted programing tools are sloppy. They produce a lot of code that might not even be relevant to the project. Personally, I hope this is just an internet fad. I believe at some point in my career I will need to interact with an AI. I just don’t think it will be able to take over for me. I will still bring new ideas to the table and be an asset to a company.

Another emerging trend is the use of Virtual Reality and Augmented Reality in medical training. Universities “investing in training their students by using Virtual Reality peripherals.” (Anderson, 2019) Training medical professionals this way is incredible. It allows students to see a lot of different scenarios without risk to living patients. Computer Science will continue to innovate to develop this technology. One day doctors may not even need to be in the same room as a patient undergoing a procedure. The doctor could use VR and robotics to perform the procedure. It may sound like science fiction, but I don’t think it is that far-fetched. I work in education. I will need to spend some time looking into ways AR and VR can help students learn and experience things.

I have achieved all 5 course outcomes. I have been able to (1) employ strategies for building collaborative environments that enable diverse audiences to support organizational decision-making in the field of computer science, (2) design, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts, (3) design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices, (4) demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals, and (5) develop a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources.

**Part Two: Status Update**

|  |  |  |  |
| --- | --- | --- | --- |
| **Checkpoint** | **Software Design and Engineering** | **Algorithms and Data Structures** | **Databases** |
| **Name of Artifact Used** | Artifact Name: AirgeadBanking/Investment  Origin: CS-210 Programing Languages | Artifact Name: Vacation slideshow  Origin: CS:250 Software Development Lifecycle | Artifact Name: Animal Shelter  Origin: CS340: Advanced Programming Concepts |
| **Status of Initial Enhancement** | Completed enhancement | Completed enhancement | In progress |
| **Submission Status** | Submitted 3/23/25 | Submitted 3/30/25 | Submitted 4/6/25 |
| **Status of Final Enhancement** | In progress | In progress | Not started |
| **Uploaded to ePortfolio** | In progress | In progress | Not started |
| **Status of Finalized ePortfolio** | Not started | Not started | Not started |

Works Cited

Willison, S. (n.d.). Not all AI-assisted programming is vibe coding (but vibe coding rocks). Retrieved from https://simonwillison.net/2025/Mar/19/vibe-coding/

Anderson, M. (2019, February 28). The future of VR and AR. Retrieved from https://www.computer.org/publications/tech-news/trends/the-future-of-vr-and-ar