6-1 Journal: Emerging Technology and Artifact Update

Ryan Summers

Southern New Hampshire University

CS-499-13167 Computer Science Capstone

Professor Gene Bryant

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**Part One: Trends**

Micronization is a game-changing technology. What required a hard drive a decade ago now can be placed on a chip the size of a dime. (“Emerging & Disruptive Technologies: The Game Changers | Proceedings - August 2018 Vol. 144/8/1,386,” 2019) Shirking the physical size of technology enables it to be more portable and hold more information in a small space. Look at quad propeller drones for example. These are everywhere. They capture amazing film and photos. 20 years ago this sort of thing would be considered science fiction, now you can go buy it at Walmart. Micronization will impact computer science. I’m sure as tech shrinks in size, more powerful devices will emerge. These devices will most likely use newer programing languages that computer scientists will need to learn to use.

A disruptive technology that has arrived would be electric vehicles. Lots of people love them, and lots hate them. These electric vehicles have the potential to really shake up computer science. Most of these cars a loaded with bleeding edge tech. There are now self-driving vehicles that rely on various sensors to map the road. Then a program makes driving decisions based on the inputs. Computer science will need to come up with ways to improve these autonomous cars for the public to truly embrace them. Could you imagine getting in a car then just telling it where you want to go? I believe that is what we are heading towards.

I have demonstrated 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**

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| **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 | Completed enhancement |
| **Submission Status** | Submitted 3/23/25 | Submitted 3/30/25 | Submitted 4/6/25 |
| **Status of Final Enhancement** | Completed enhancement | Completed enhancement | Completed enhancement |
| **Uploaded to ePortfolio** | Uploaded | Uploaded | Uploaded |
| **Status of Finalized ePortfolio** | Working on descriptions | Working on descriptions | Working on descriptions |

Works Cited

Emerging & Disruptive Technologies: The Game Changers | Proceedings - August 2018 Vol. 144/8/1,386. (2019, February 21). Retrieved from https://www.usni.org/magazines/proceedings/2018/august/emerging-disruptive-technologies-game-changers