CS 499

Professor Troy Hawk

Michael Thomas

8 June 2025

Computer Science Trends and Artifact Update

Trends:

* [The Future of VR and AR](https://www.computer.org/publications/tech-news/trends/the-future-of-vr-and-ar)
* [The Future of Video Gaming: Technologies That Will Transform Our Experiences](https://www.apollotechnical.com/the-future-of-video-gaming/)

Part One:

* What is the significance of each trend?
  + The rise of VR and AR is changing how individuals interact with digital environments. While not just enhancing gaming experiences, the reach expands into employee training, healthcare, and remote collaboration (Matthews, 2018). As technology becomes more affordable and powerful, it is expected that VR and AR will be integrated into daily life and workspaces. Similarly, this tech is found in video games, transitioning simple entertainment into immersive, socially connected, and emotionally engaging experiences. Emerging technologies like cloud gaming and AI-driven narratives drive games to become more accessible, developing personalized user experiences (Bradshaw, 2023).
* How will each trend change the field of computer science?
  + Gaming trends will continue to push computer science toward more sophisticated AI, physics engines, and real-time rendering technologies. Developers will need to learn new tools and optimizations for multi-platform performance, including mobile, console, and cloud systems. With VR/AR trends, significant growth will be seen in areas like 3D modeling, spatial computing, and real-time data processing. Computer scientists will be responsible for improving latency, user interfaces, and motion tracking, which means innovations in both hardware and software.
* How will each trend change the experience of consumers, workers, or citizens?
  + For consumers, video games are no longer just about fun, but are becoming platforms for social interaction, education, and even therapy. With cloud-based improvements making games more accessible from anywhere, increasing inclusivity and removing hardware barriers. For workers and citizens, AR and VR offer new ways to train and learn. From virtual classrooms to realistic simulations for surgeons or pilots, the practical applications are growing rapidly. These tools could soon become standard in corporate training and remote workspaces (Matthews, 2018).
* How will each trend fit in with your career interests or aspirations?
  + Both trends strongly align with my career goal of becoming a video game designer/developer. I have always had this passion, and integration of AR/VR into games is especially exciting. While I plan to start as a solo developer, learning how to create immersive, interactive experiences will prepare me to contribute meaningfully to a team in the future. Developing a strong understanding of current trends will help me stay competitive and relevant to the industry as it continues to evolve.
* Which course outcomes have you achieved so far, and which ones remain?
  + While I still need to complete some work to fully achieve outcomes 1 and 5, I plan to accomplish this with my ePortfolio publication and with the work completed for the third enhancement. I have already achieved outcomes 2, 3, and 4 with previous work and the second enhancement added to these. This was completed through code maintenance and organization, the application of standardized software testing principles and complex algorithmic problems, and the use of modern tools and innovative practices.

Part Two:

* Status Checkpoints for All Categories

|  |  |  |  |
| --- | --- | --- | --- |
| **Checkpoint** | **Software Design and Engineering** | **Algorithms and Data Structures** | **Databases** |
| **Name of Artifact Used** | **Origin:** CS 320 Software Testing, Automation, and Quality Assurance  **Name:** Appointment Service | **Origin:** CS 320 Software Testing, Automation, and Quality Assurance  **Name:** Contact Service | **Origin:** IT 145 Foundation in Application Development  **Name:** Grazioso Salvare |
| **Status of Initial Enhancement** | Completed, instructor has reviewed, no changes necessary to codebase | Completed, instructor has reviewed, no changes necessary to codebase | Started, on track for on-time submission |
| **Submission Status** | Submitted and graded | Submitted and graded | Not yet submitted |
| **Status of Final Enhancement** | Feedback received, enhancements revolve around security and narrative documentation that will be updated with ePortfolio publication | Feedback received, enhancements revolve around security documentation that will be updated with ePortfolio publication | Not applicable, no feedback yet. |
| **Uploaded to ePortfolio** | Will be published soon | Will be published soon | Will be published once final enhancement is finished. |
| **Status of Finalized ePortfolio** | Planned but not yet completed. | Planned but not yet completed. | Planned but not yet completed. |

Source(s)

Bradshaw, R. (2023, June 30). *The Future of Video Gaming: Technologies That Will Transform Our Experiences*. Apollo Technical LLC. <https://www.apollotechnical.com/the-future-of-video-gaming/>

Matthews, P. (2018, May 1). *The Future of VR and AR*. IEEE Computer Society. <https://www.computer.org/publications/tech-news/trends/the-future-of-vr-and-ar>