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CS-499 Computer Science Capstone

10/08/25

Module 6-1

Journal: Emerging Technology and Artifact Update

Part One:

1. What is the identification and description of each technology?
   * I think the two previous topics I discussed fit this topic very well and I would like to dive a little deeper into the topic of green technology and for a new topic to look at would be 3D printing.
   * Green Technology – The reason it is disruptive is due to the fact of having to change the norms of the industry, by trying to change the effects on the environment, the ethical consumption of materials, and the exploitation of the global south.
   * 3D Printing – I think this has an enormous connection to the above topic of green technology, but it also adds disruption to all industries as it adds accessibility due to reduce cost and materials.
2. What are the likely impacts on computer science or your career?
   * Green technology – this will affect my career due to the way the world will have to change in order to save the planet and the way the world changes the way we live on it. All hardware that uses software needs materials and if we do not find a more sustainable and ethical way of consuming them, then we may not have certain technologies available to us in the future. This has to be the number one issue that needs to be addressed and I would love to work for companies that put time and effort into these goals as we want to advance the world towards something greater than we ever thought possible.
   * 3D Printing – I think when most people think of this the envision the little at home plastic printers, which I think need to be address due to the consumerism and excess plastics they add to the environment that effect climate problems but that is for another day. We can see that 3d printing is being used in technological sectors to make things that were once to delicate, reduced in weight by being printed in a material that a human was not able to manufacture, or even in more humanitarian efforts in ways of food printing. These are just some of the ways it is being used and the need for software and programing to achieve these goals is necessary and will be a great indicator of how the career field will grow and improve future opportunities within this field.
3. How might the two technologies impact humans, communities, or the world?
   * I think both of these falls into the same basic category of being the change that will affect the world. Whether that be for good or not is yet to be seen. I have taken a couple of different courses on ethics and seeing that companies do not always have the consumers’ best interest in mind and care more about profits makes me nervous about how these new technological innovations will go. I am optimistic about how they can be used for good and the potential for the good they can produce. For 3D printing, I have seen houses being built in areas that have never had them due to a machine that was programming to print out a blueprint of a house using cement, thus making it cheaper due to not needing wood or workers in the same way a traditional house does. This could be a huge improvement in areas that need more housing but due to funding have not be afforded the opportunity. In terms of green technology, a good example is vertical farming and learning about how space, weather, lighting, and other variables can all be controlled to get very reliable food sources going to get more food produce. This will in turn reduce cost and waste, with the added goal of hoping to end the global issue of world hunger and climate change. These can both be great indicators of how the world could be changing towards a better tomorrow but with history usually repeating we have to cautiously aware and make sure that they are used for the betterment of everyone so that the planet and it’s people can continue on for generations.
   * Overall, I am excited to see where everything leads but hope to see it move in the right direction and not only in the direction of profit but with the notion of the humans at the forefront and the push for a more sustainable world moving forward.
4. Which course outcomes have you achieved so far, and which ones remain?
   * I think I have completed all of the objectives I set out to (in essence) with the main being using the best coding practices and making sure to have legible code and making things simple and easy to follow. Once the final product is completed and the code is running with no bugs I think I will of produce something that I am proud of and showcases a development that is more then me just following a worksheet and that I can work through problems and solve issues when they arrive.

Note: The technologies can be at the center of computer science—such as new application programming interfaces (APIs), cloud computing, or augmented reality—or technological developments that will touch on or impact computer science, such as different types of biotechnologies or emerging energy sources.

Part Two:

Provide an update to your instructor on your progress with each category of artifacts for the ePortfolio:

* Software design and engineering
* Algorithms and data structures
* Databases

Below is the final update on the progress of the final artifacts:

The application seems to be working as intend for most parts with slight bugs when dealing with authentication, but I am trying a new method to see if that solves the issue. The new design features look as intended so I think it meets the design aspects, I set out to achieve.

For the database I have the sports card database setup but cant seem to get the final product to show up they way I want, so that is the final part that I need to work on to get that desired effect but I am excited to see it come through in a way that I never really achieved when working through it in class. I think it really showcase the skills need to work with databases but in a way most people can relate to.