Nevena Young

CS – 499: Computer Science Capstone

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**6 – 1 Journal Response: Cloud Computing and Blockchain**

Cloud computing is a technology that delivers computing services, like storage, processing power, databases, networking, and software, over the internet instead of using local servers or personal devices. With providers such as Amazon Web Services, Microsoft Azure, and Google Cloud, users can access resources on demand and pay only for what they use. This makes it easier for businesses and individuals to scale their operations, launch applications quickly, and collaborate from anywhere without needing to invest heavily in physical infrastructure.

Blockchain technology is a decentralized digital ledger that records transactions in a secure, transparent, and unchangeable way. Rather than being stored in one place, copies of the data are kept across many computers, which makes it highly resistant to tampering or fraud. While it first became known as the system behind cryptocurrencies like Bitcoin, blockchain is now used in industries such as finance, supply chain management, and healthcare. It can be used for things like secure peer-to-peer transactions, automated agreements through smart contracts, and creating records that are permanent and easy to verify.

Both cloud computing and blockchain technology are likely to have a big impact on computer science and my future career. Since I want to work for AWS as a Solutions Architect, gaining deep knowledge of cloud computing is especially important because it would allow me to design, deploy, and manage scalable solutions for clients around the world. Blockchain is also becoming more relevant in cloud environments, especially for security, transparency, and decentralized applications. By building expertise in both areas, I can position myself to contribute to innovative projects at AWS, help businesses solve complex problems, and stay ahead in a rapidly evolving tech industry.

Cloud computing and blockchain technology have the potential to greatly impact humans, communities, and the world. Cloud computing makes information and tools more accessible, allowing people to work, learn, and collaborate from anywhere, which can improve education, job opportunities, and global connectivity. Blockchain adds a layer of trust and security, making transactions more transparent and reducing the need for intermediaries, which can empower individuals and communities by giving them more control over their data and assets. Together, these technologies can drive innovation, close digital gaps, and create more equal opportunities worldwide.

So far, I have achieved course outcomes related to understanding and explaining emerging technologies, analyzing their impact on industries, and connecting them to real-world applications. I’ve also improved my ability to research and clearly communicate technical concepts in writing. The outcomes I still need to work on include diving deeper into the technical details of how these technologies function and exploring more advanced examples of their use. I also want to strengthen my skills in applying these concepts to hands-on projects that could prepare me for my future career goals.