**Part One: Journal Entry**

**Identification and Description of Each Technology**

1. **Machine learning and Artificial intelligence:** In simple words, ML is a subset of an AI and both are revolutionizing the field of computer science. These enables computer to stimulate human intelligence and learn from data with being explicitly programmed. From self-driving cars to recommendation systems and medical diagnostics, these are application ranges.
2. **Blockchain Technology**: In simple words, blockchain is a distributed ledger system, decentralized that securely records transactions across multiple computers. There were high demand and people have an eye on Blockchain through cryptocurrencies like Bitcoin now since expanded into sectors like supply chain, healthcare, and digital identity verifications due to its transparency and security.

**Impact on Humans, Communities, or the World**

Personalized healthcare, smarter cities, and improves in education system are only possible because of AI/ML. As it has some concerns about privacy, security, bias and moreover job displacements, necessitating ethical considerations in development.

Talking about blockchain, it highly promotes trust, decentralization and data integrity, particularly in those places where institutions lack transparency. However, it is highly consumption and regulatory challenges which in is priority to addressed for broader adoption.

**Course Outcomes Achieved and Remaining**

Achieved**:**

1. To problem solving applying data structures and algorithms.
2. Using version control and collaborative development tools gained proficiency.
3. Hands- on experience in building database backed applications.
4. Shows the use of design principles in software engineering.

Remaining:

1. To upload the finalized eprotfolio.
2. To complete the documentation
3. To complete Enhancement for the eprotfolio

**Part Two: Status Checkpoints for All Categories**

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| --- | --- | --- | --- |
| **Checkpoint** | Software Design and Engineering | Algorithms and Data Structures | Databases |
| Name of Artifact Used | DriverPass System Project | Sorting Algorithms Project | Heart Disease Prediction using SQL & Python |
| Status of Initial Enhancement | Completed basic enhancements with comments and structure revisions | Implemented and compared multiple sorting algorithms | Data cleaning and SQL joins added, initial write-up done |
| Submission Status | Submitted for review | Submitted for review | Submitted for review |
| Status of Final Enhancement | Refining edge cases and user input handling | Optimizing time complexity explanations and edge case tests | Final report and analysis in progress |
| Uploaded to ePortfolio | Not yet uploaded | Not yet uploaded | Not yet uploaded |
| Status of Finalized ePortfolio | In progress | In progress | In progress |