

- A. In my words, machine learning is the branch of computer science that tries to replicate the human brain. It is used with data and attempts to learn with the patterns and plots formed with the data. It is a branch of artificial intelligence that is paired with data processing.
- B. Data, pattern recognition, and accuracy are the main aspects of machine learning. What machine learning does is use data and many tools to search for and identify patterns to learn to see if future patterns can be predicted. Sometimes the data being predicted is important data so accuracy is prioritized in order to make the implementation of machine learning more feasible. Machine learning is essentially the technological replication of a human brain learning, and as with humans, it processes and learns with data and patterns.
- C. Machine learning is an aspect of Artificial Intelligence that helps it learn over time through experience without the use of actual instructions. It allows the AI systems to continue to grow, furthering the intelligence aspect of AI.
- D. One example of a modern machine learning application is ChatGPT. This application has become very popular and has gained a drastic increase in users. This has caused this application to learn and evolve exponentially with its machine-learning algorithms. If Chat GPT did not use machine learning, it would be much more resource intensive and would have faced many bottlenecks along with a slower evolution. Another example of a modern machine-learning application is the recommendation system in most social media like Facebook. These machine-learning algorithms learn off of search results and common interests and adapt with the data to show things a user may find interest in. These recommendation systems could not be built with traditional programming methods since it could not evolve properly.
- E. In machine learning, observation represents the observation of data in which certain facts and patterns are picked up. Features are characteristics of the data. Quantitative data is numeric data, and qualitative data is categorical data, known as a factor. These are important since they are the definitions used in machine learning to understand the data. They help categorize and organize the data so that it can be properly processed.
- F. My personal interest in machine learning stems from my interest in the concepts of programs learning over time. I have always known of the concept of machine learning but never have truly understood how it works behind the scenes. I would like to understand the concepts of machine learning so that I could personally implement them into projects of mine that could vastly benefit from it. Even learning the basic concepts would help me drastically.