Claude Shannon is commonly known to have founded *Information Theory*  based on his paper, “*Mathematical Theory of Communication****”*** published in 1948. Although Shannon’s legacy is mostly towards his work on *Information Theory*, he also contributed to various aspects in the current field of *Computer Science* such as *Cryptography, Big Data, Machine Learning* and many others. His contribution towards *Machine Learning* will be the basis of this paper as he is said to have laid the foundation of *Machine Learning*,which many others may have know it as *A.I.* (Artificial-Intelligence).

One of Claude Shannon’s work involving artificial intelligence was *Theseus* which is basically a *maze-solving mouse* that learns and remembers its path to the specified goal when placed on top of the machine that contains a modular maze of 5x5 squares. The procedure the mouse takes in order to solve the maze is similar to that of brute force as the mouse tries all possible direction until it is able to move closer to its goal. Once able to move forward the direction that the mouse moved is then stored in memory for future use. Therefore once the mouse had finally reached its goal, if it is then again placed into another location of the maze in the same layout, the mouse is able to recall its previous decision and will be able to reach the goal without any mistakes. If the maze were to be modified, the mouse is able to search through the modified space and once fully explored is able to again find a path to the goal. This machine Shannon built was considered the first of its kind, basically laying the foundations of future machine learning theories as it is able to learn from its environment and is able to adapt when it changes.

In 1950 Shannon published another paper called “*Programming a Computer for Playing Chess”* which described his process on which he can find a solution to the next available move. Shannon came up with two different approach which were *Type A* and *Type B.* In *Type A*, it is described to be one that uses a brute force method in finding a possible move which is a very simple idea but it would be very slow process. In Type B, its approach is to use a selective search method where it will only search for a reasonable amount of moves, such as computing the possible moves after 3 turns. Even with just these two ideas it provides a basis in which current A.I. is based upon, which is basically search, but in a way that the search times are within reasonable time and its solutions are up to some specified standard.

Although Shannon did not focus his work onto the advances of *Machine Learning*, his contribution have helped provided a foundation in this field of *Computer Science* such that others are able to build upon them and further the research and understanding of Machine Learning.