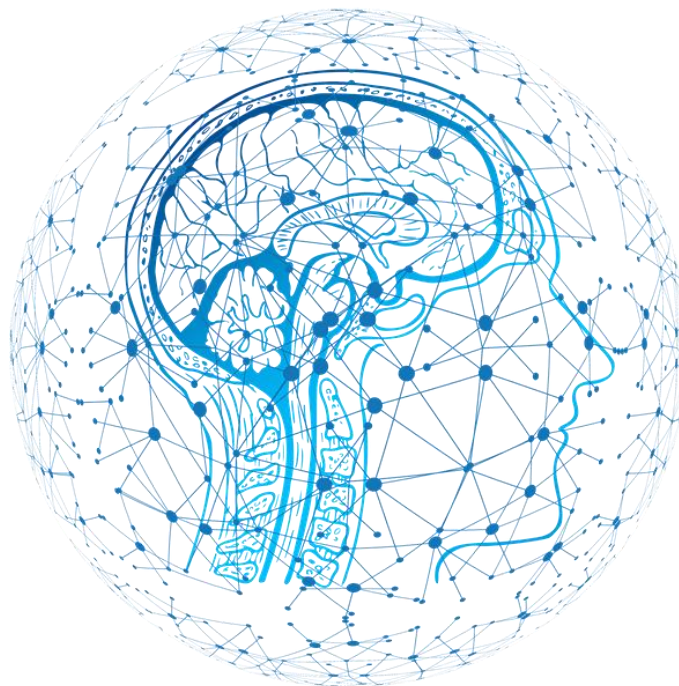


# Art of Artificial Intelligence

Poojan Trivedi

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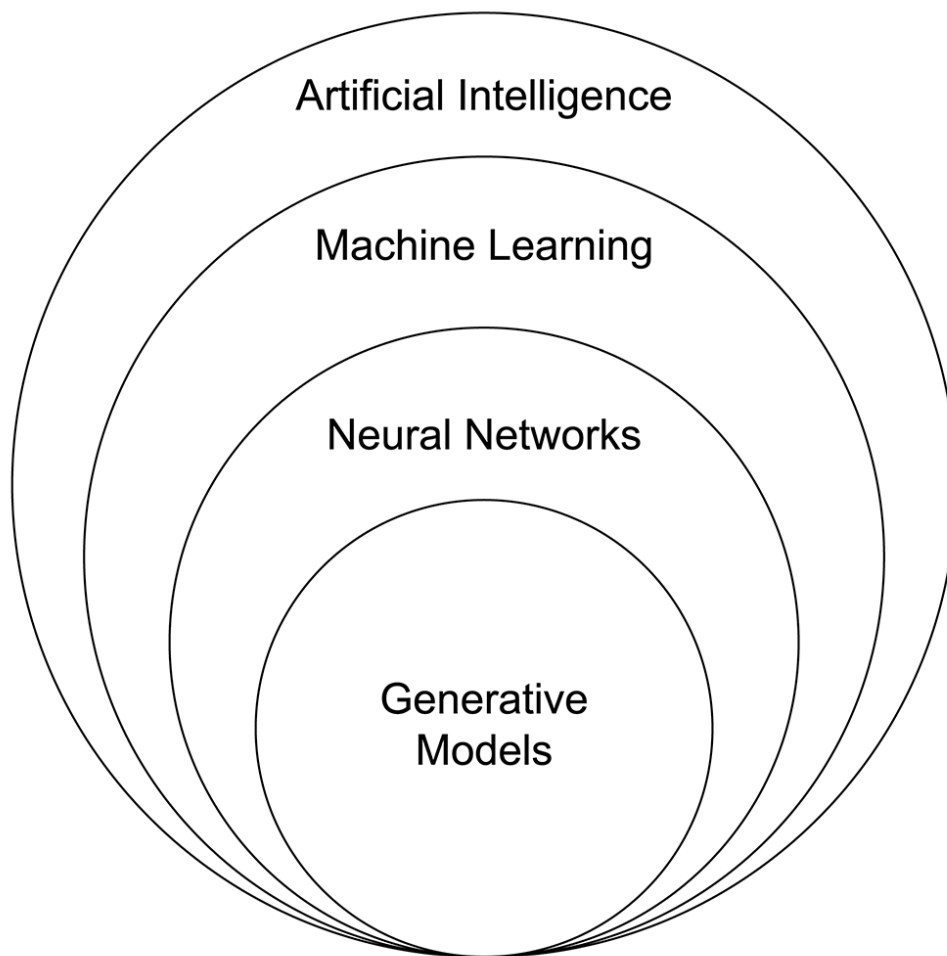


## I. Introduction

Artificial Intelligence is a process to automate intellectual task normally done by humans. (*TensorFlow Google*)

Artificial Intelligence, or AI, refers to the field of computer science that deals with creating intelligent machines that can learn and perform tasks that normally require human intelligence. The goal of AI is to build algorithms and models that can simulate human cognitive processes, such as perception, reasoning, and decision-making, in order to solve complex problems and automate tasks. AI technologies have been advancing rapidly in recent years, with breakthroughs in machine learning, natural language processing, computer vision, and robotics. As a result, AI is now being used in a wide range of applications, from autonomous vehicles and virtual assistants to healthcare and finance and is transforming the way we live and work.

Artificial Intelligence also includes aspects of computer science such as machine learning, deep learning as well as neural network. (*Neural network isn't related to actual neurons in human brain*)



As given diagram suggest, in order to create AI model, one must be familiar with all the aspects given in diagram. There are several programming languages which are used for programming, A programming language called “python” is most popular among all of them.

## II. Development of AI

The first step in creating AI is to define the problem that the AI will be solving. This involves identifying the data that will be used to train the AI, the specific task that the AI will be performing, and the criteria for measuring success. For example, an AI system designed to recognize objects in images might be trained on a dataset of labelled images, with the goal of achieving a high accuracy rate.

Once the problem is defined, the next step is to choose the appropriate algorithms and models to use in building the AI. There are many different types of machine learning algorithms, including supervised learning, unsupervised learning, and reinforcement learning. Each of these approaches has its own strengths and weaknesses, and the choice of algorithm will depend on the specific problem being solved.

The next step is to prepare the data for training the AI. This involves cleaning and pre-processing the data to ensure that it is in a format that can be used by the AI algorithms. For example, in the case of an image recognition AI, the images might need to be resized, cropped, and normalized to ensure that they are all the same size and have consistent lighting conditions.

After the data has been prepared, the AI is trained using the chosen algorithms and models. This involves feeding the AI large amounts of data, allowing it to learn patterns and make predictions. The training process can take a significant amount of time, depending on the complexity of the problem and the amount of data available.

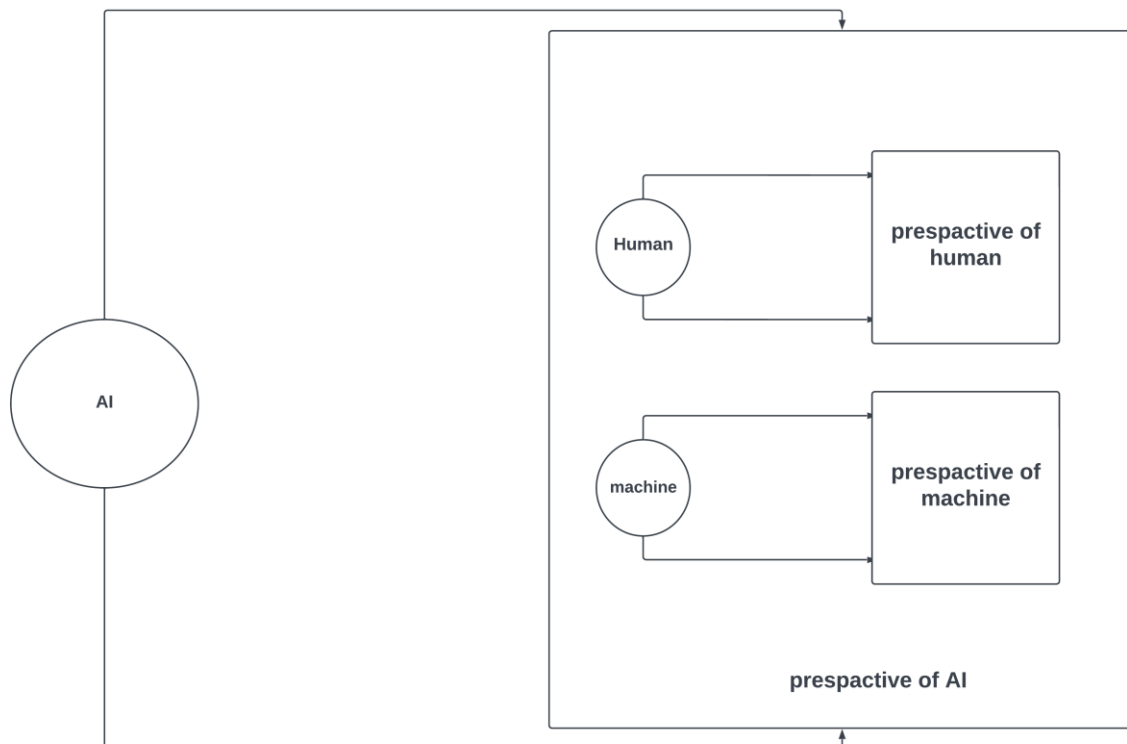
Once the AI has been trained, it can be tested to evaluate its performance. This involves using a separate dataset that the AI has not seen before to measure its accuracy and identify any areas where it needs improvement. The AI can then be fine-tuned and improved based on the results of the testing.

The final step in creating AI is to deploy it in the real world. This involves integrating it into existing systems and processes and ensuring that it is working as intended. Ongoing maintenance and updates are also necessary to keep the AI up to date and ensure that it continues to perform well.

In conclusion, creating AI involves a complex and iterative process that requires a deep understanding of machine learning algorithms, data preparation, and testing. With the right tools and expertise, however, it is possible to build intelligent systems that can revolutionize the way we live and work.

### III. Data Training

Data training can be considered integral as a part of the development phase of AI, In this part AI model is provided with large amount of data or AI is provided with tons of queries with predefined answers so the model can learn to build logic from provided data and it gets better with each data point it learns “human way to answer things” companies spends billions of dollars on data training of the AI model



As we can see in diagram given above AI considers the technical side of query as well as human side of the query, by combining these two perspective AI generates perfect results which has very balanced approach towards the query some AI models also allows user to choose from provided

Bing AI autopilot model uses similar approach which provides us with three approaches precise, balanced and creative modes.