**ADVANCED MACHINE LEARNING ALGORITHM FOR PREDICTIVE ANALYSIS IN THE BIG DATA.**

**PROBLEM DESCRIPTION:**

To deploy the machine learning model that will be helpful to analyze the dataset from the IBM cloud database and predict the future. With the help of the model user can easily identify the trends and hidden patterns in the dataset to act accordingly. It will be helpful for the company to make business decisions.

Let us discuss detail about this model, Let’s start with basics,

**WHAT IS MACHINE LEARNING?**

Machine learning is a branch of artificial intelligence and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy.

**WHAT IS MODEL DEPLOYMENT IN DATA ANALYTICS?**

Model deployment is the process of putting machine learning models into production. This makes the model’s predictions available to users, developers or systems, so they can make business decisions based on data, interact with their application and so on.

Model deployment is a challenging stage for data scientists. This is because it is often not considered their core responsibility, and due to the technological and mindset differences between model development and training and the organizational tech stack, like versioning, testing and scaling which make deployment difficult. These organizational and technological silos can be overcome with the right model deployment frameworks, tools and processes.

**TYPES OF MACHINE LEARNING MODEL:**

* Supervised Machine Learning.
* Unsupervised Machine Learning.
* Semi–Supervised Machine Learning.
* Reinforcement Machine Learning.

In this Analyse, we use supervised machine learning because according to the supervised machine learning all the data are labelled. So, we have also got the dataset in the IBM cloud database with the help of these datasets to predict the business decision, hidden patterns, etc.

**STEP BY STEP PROCEDURE TO SOLVE THE PROBLEM: (DESIGN THINKING)**

Step – 1 Collect the dataset from the various sources like Kaggle, DataWorld, etc.

Step – 2 Create the IBM cloud account from the official website and put the dataset.

Step – 3 Choose the Machine Learning model which you can deployed.

Step – 4 With the help of the python programming language and their useful libraries like TensorFlow, Scikit – learn, pandas, SciPy, NumPy, scikit – image and many more libraries.

Step – 5 Collaborate machine learning model with our dataset and identify our trends and hidden patterns to identify the business decisions.

With the help of the above steps to create the model and find the business decisions.

Let us see the diagrammatical representation to solve the problems,

**DATA COLLECTION:**

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes.

**DATA CLEANING AND PROCESSING:**

Data cleaning is the process of fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within a dataset.

**ANALYZE THE DATASET USING MACHINE LEARNING MODEL:**

In this process the machine learning model analyzes the dataset from the IBM cloud database and gives some results based on the dataset values.

According to the results produced by the machine learning model we can find the trends and hidden patterns in the dataset and predict the business decision.

**CONCLUSION:**

Finally, we conclude that with the help of the machine learning model we can easily, quickly get the result and find the trends and hidden patterns in the dataset and predict the business decision.