



***B.DEEPIKA***  
***REG NO:921821104007***  
***PRO.NAME:ML MODULE WITH IBM***  
***WATSON***



- 1.Data Ingestion: Upload and prepare your dataset within Watson Studio's environment.*
- 2.Data Preprocessing: Clean and preprocess the data, which may involve handling missing values, encoding categorical variables, and scaling features.*
- 3.Feature Engineering: Create new features or transform existing ones to improve the model's predictive performance.*
- 4.Splitting the Data: Divide your dataset into a training set and a testing/validation set to assess the model's performance.*

*5. Model Selection: Choose a suitable machine learning algorithm for churn prediction. Common algorithms include logistic regression, decision trees, random forests, or gradient boosting.*

*6. Model Training: Train the selected model on the training data.*

*7. Hyperparameter Tuning: Optimize the model's hyperparameters to improve its predictive accuracy.*

*8. Model Evaluation: Evaluate the model's performance using appropriate metrics (e.g., accuracy, precision, recall, F1-score, ROC AUC).*

*9. Model Validation: Assess the model's performance on the testing/validation dataset to ensure it generalizes well to new data.*

## ■ *Model Deployment:*

■ *To deploy the trained model in IBM Cloud Watson Studio:*

*1. Save the Model: Save the trained machine learning model.*

*2. Create a Deployment Space: Within Watson Studio, create a deployment space where your model will be hosted.*

*3. Deploy the Model: Use the deployment capabilities within Watson Studio to deploy the model as a web service. You can select the appropriate runtime environment and configuration.*

*4. Scoring Endpoint: After deployment, you'll obtain a scoring endpoint URL that allows you to make predictions in real-time.*

## ■ *Integration:*

- *You can integrate the deployed model into applications or systems for real-time predictions:*

*1.API Integration: Use the scoring endpoint URL to make API calls to the model. This can be integrated into your web or mobile applications.*

*2.Batch Processing: For batch processing, you can schedule regular data updates and predictions based on the model's output. This can be used for customer segmentation or targeted marketing campaigns.*

*3.Monitoring and Feedback Loop: Continuously monitor the model's performance and gather feedback on its predictions to further improve its accuracy and relevance.*

*By following this process, you can create a predictive analytics use case to predict customer churn, and leverage IBM Cloud Watson Studio for dataset preparation, model training, deployment, and seamless integration into your business processes.*