**Machine learning Assignment**

### **1. Job Classification**

* **Objective**: Classify job postings into different categories (e.g., IT, Marketing, Healthcare) based on their descriptions.
* **Approach**:
  + **Text Classification**: Use machine learning algorithms like Naive Bayes, Support Vector Machine (SVM), or deep learning models (like CNNs or LSTMs) to classify job postings into predefined categories.

2. For evaluation below outline you should be followed:

#### **Problem Definition:**

* **Input**: User profile (e.g., skills, education, work experience), job listings (e.g., job title, description, required skills)
* **Output**: Job recommendations or matching score.

#### **Possible Approaches:**

* **Data Preprocessing**:
  + Clean the job descriptions and resumes.
  + Extract features like skills, qualifications, job titles, etc.
* **Model**:
  + **For Recommendations**: You could implement a collaborative filtering or content-based filtering model.
  + **For Classification**: Train a classification model (e.g., Random Forest, SVM, Neural Networks) to categorize jobs or candidates.
  + **For Ranking**: Implement a ranking model using machine learning techniques or NLP-based models.
* **Evaluation**:
  + Use metrics like Precision, Recall, F1-Score, or Mean Average Precision (MAP) to evaluate the performance.