Employee Future Prediction

Abstract:

The goal of this project was to use classification models to the future of an employee in order to help the company predict to know to when give them a promotion to let them stay for a longer time. also, it help the company to make a plan to fill the empty position with
temporary employees and help the company to know when to give them a promotion to let them stay for a longer time.

Data Description:

- The data pertains to a company's HR department wants to predict whether some employees would leave the company in next 2 years. i will build a predictive model that predicts the prospects of future and present employee.
- The data includes the following features:
  (Education , JoiningYear , City , PaymentTier , Age , Gender , EverBenched , ExperienceInCurrentDomain , LeaveOrNot)

Data Source:

Employee Future Prediction | Kaggle

Design:

Classifying employees accurately via machine learning models would enable the helps the company take future actions in improving the selection of new employee.

Algorithms:

- feature engineering :
  LabelEncoder
  StandardScaler

- classification models:

  KNeighborsClassifier
  SVC
  DecisionTreeClassifier
  GaussianNB
  MLPClassifier
  QuadraticDiscriminantAnalysis

Tools:

- There are tools I will used in the datasets, such as:
  - Data Processing: Panda, Numpy.
  - Modeling: Scikit-Learn.
  - Visualizations: matplotlib, seaborn