

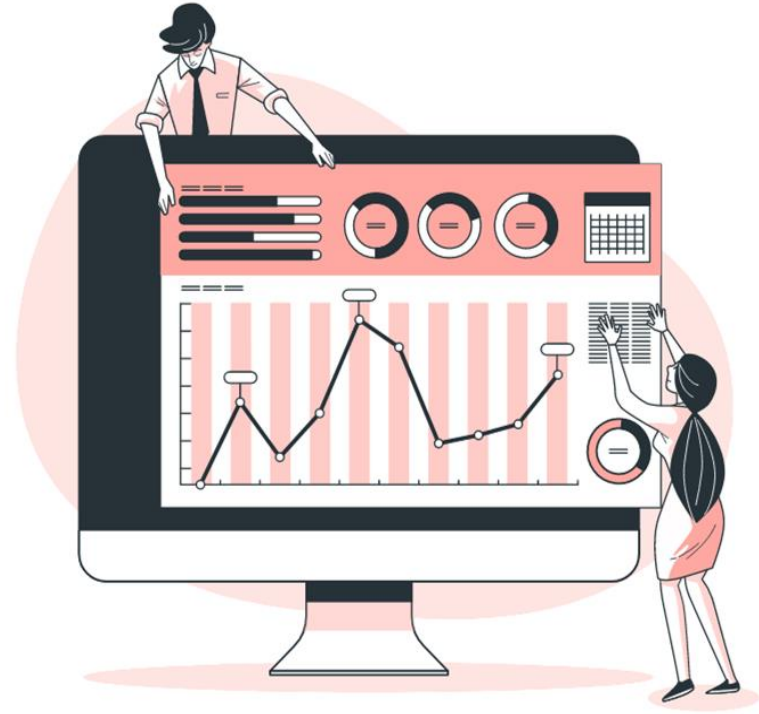


SDAIA

الهيئة السعودية للبيانات
والذكاء الاصطناعي
Saudi Data & AI Authority

HR ANALYTICS JOB BY CLASSIFICATION ALGORITHMS

Presented by:
❖ Annal Ali Albeeshi



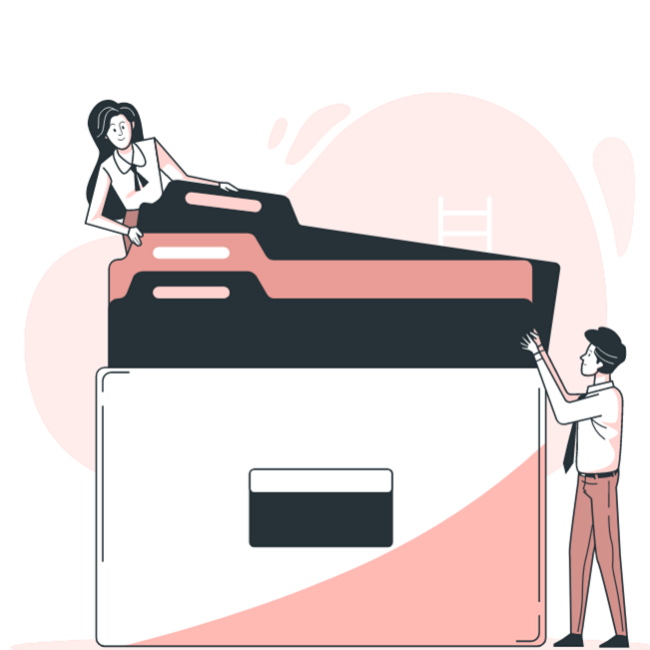
OUTLINE

01

OUR COMPAN

03

METHODOLOGY



02

DATASET DESCRIBING

04

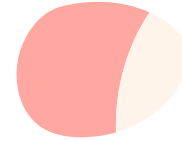
RESULT

OUR COMPANY

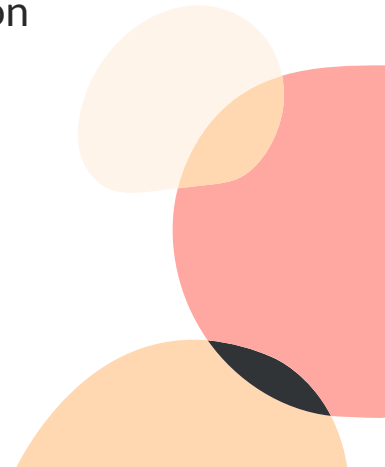


A company who provided Data Science training is in need of Data Scientist for their own company and the HR department decided to make new enhancement in the process of recruitment from candidates who sign up their training.

Business Question



How to predict the probability of a candidate to look for a new job or will work for the company, as well as interpreting affected factors on employee decision ?

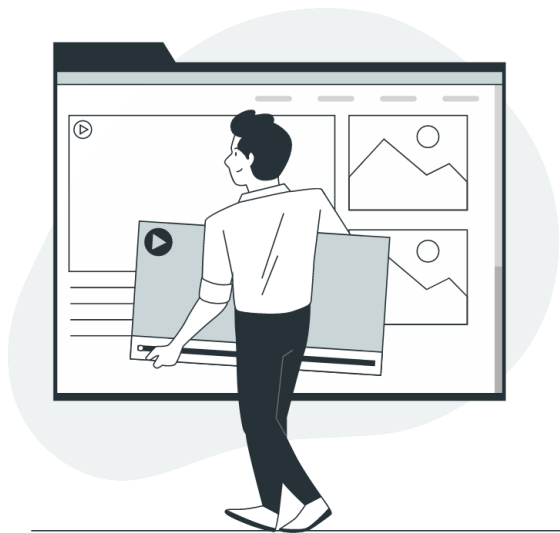


02



DATASET DESCRIBING

DATASET DESCRIBING



Kaggle.

❖ Our Dataset
we get it from
Kaggle.

Contains

❖ **19158 Row &
14 Columns.**

METHODOLOGY



01 Pre_processing

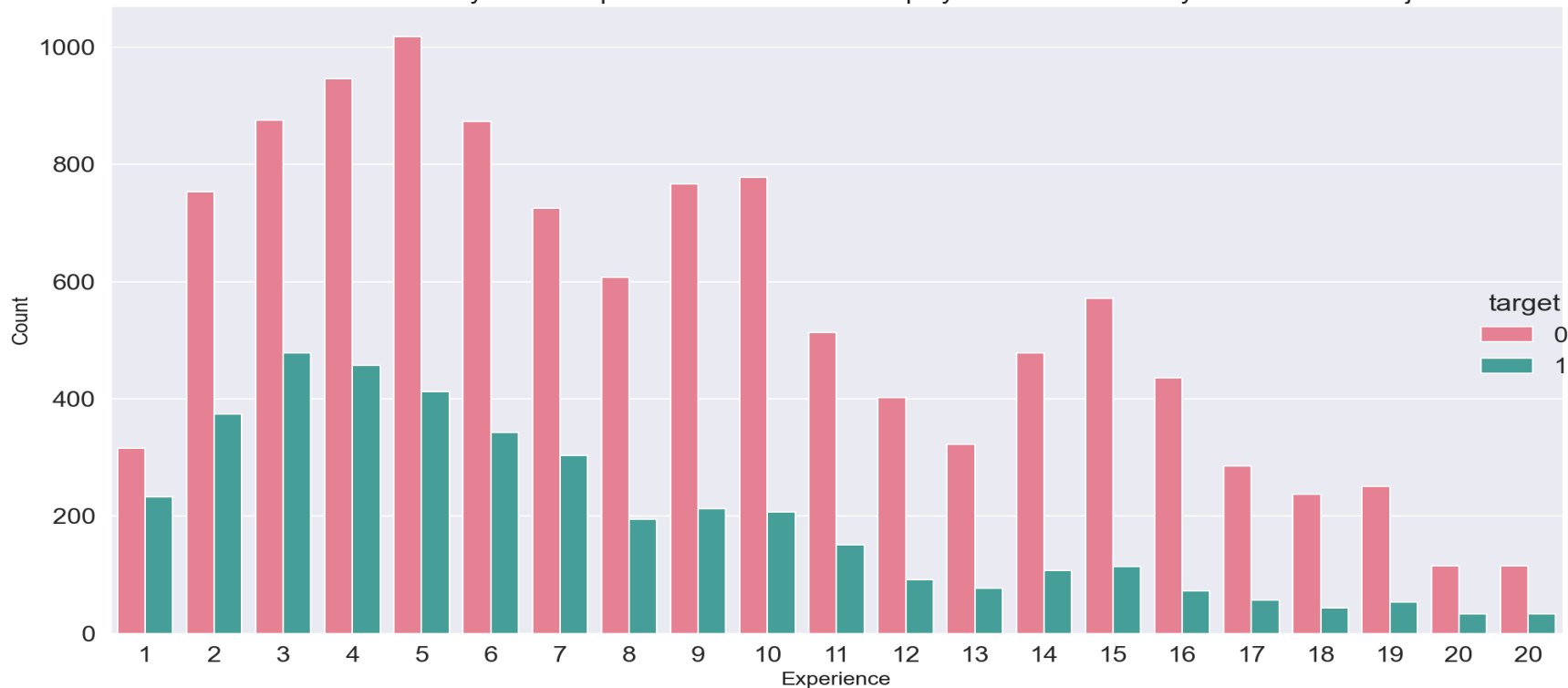
02 EDA Analysis.

03 Algorithms.



Methodology ... EDA Analysis

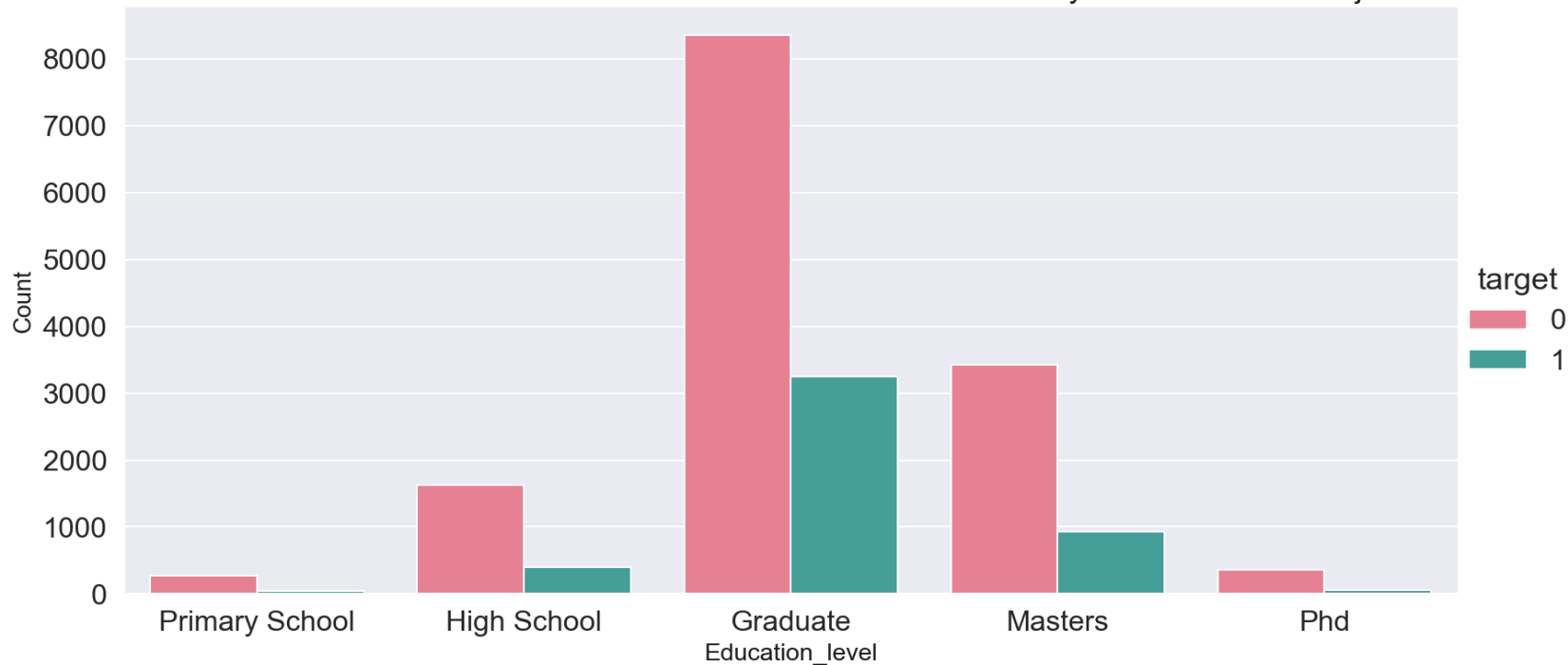
The extent to which years of experience influence the employee's decision to stay or look for a new job





Methodology ... EDA Analysis

The extent to which the educational level affects the decision to stay or search for a new job



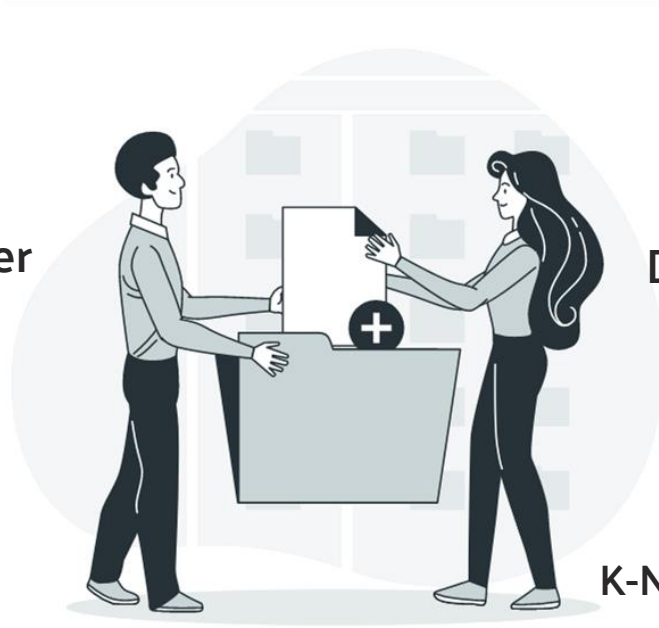
Methodology ... Algorithms



Logistic Regression Classifier



Random Forest Classifier



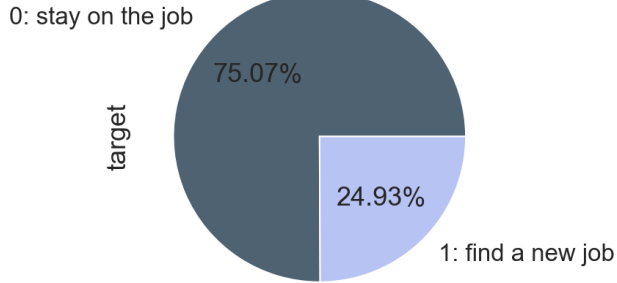
Decision Tree Classifier



K-Nearest Neighbor(KNN) Classifier

HANDLE IMBALANCED DATASETS

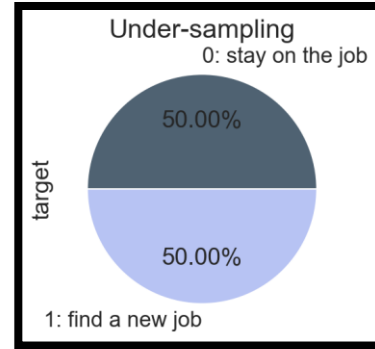
❖ The dataset is imbalanced



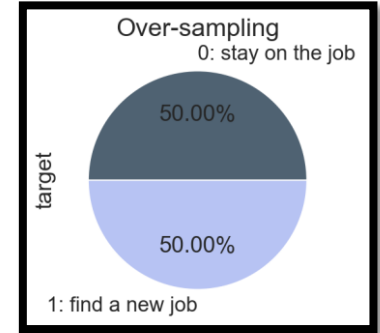
❖ To deal with this problem, three methods were used:

1. Random Undersampling:
2. Random Oversampling
3. SMOTE

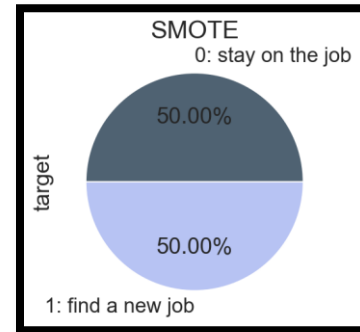
01



02



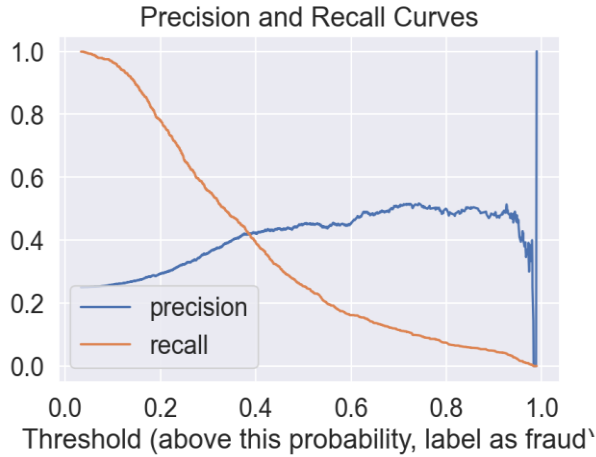
03



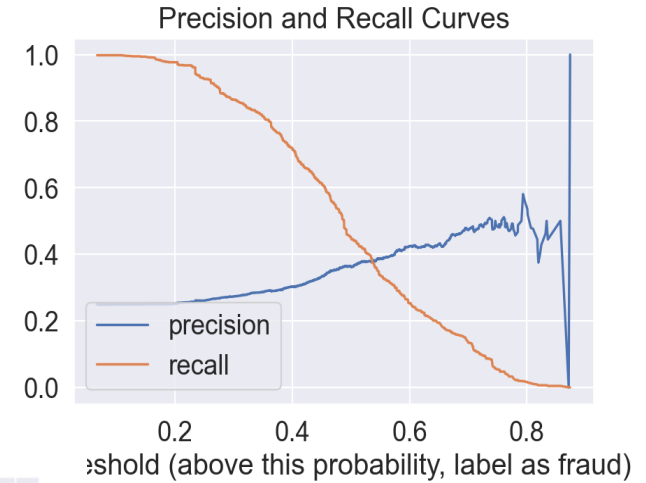
Algorithms Result with SMOTE

	Training	Test set	Precision	Recall	F1
Logistic Regression	80	73	44	25	32
Decision Tree	83	68	39	47	44
Random Forest	81	73	46	52	49
K-Nearest Neighbor	83	73	43	25	32

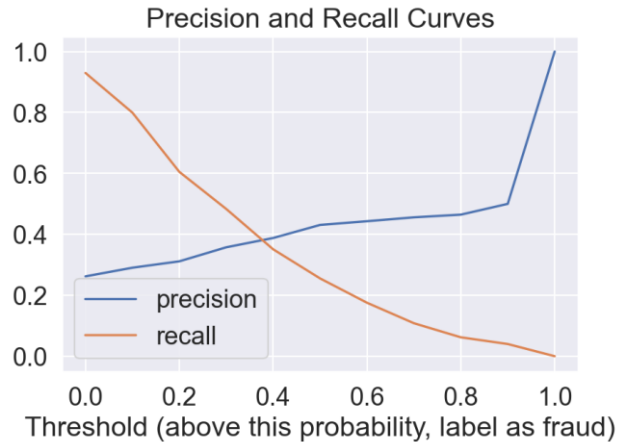
Visualization



Logistic Regression



Random Forest



K-Nearest Neighbor

Thanks!

**DO YOU
HAVE ANY
QUESTIONS?**

