

EMPLOYEE TURNOVER



••• About **TURNOVER**

"Employee turnover in human resources refers to the gradual loss of employees over time. In general, relatively high attrition is problematic for companies. HR professionals often assume a leadership role in designing company compensation programs, work culture and motivation systems that help the organization retain top employees."



OBJECTIVE

Our role is to uncover the factors that lead to employee attrition through Exploratory Data Analysis, and explore them by using various classification models to predict if an employee is likely to quit. This could greatly increase the HR's ability to intervene on time and remedy the situation to prevent attrition.





MISSION

Our mission is to analyze and predict the categories that contributes for the employee turnover in an organisation and how can the organisation overcome this problem of attrition.

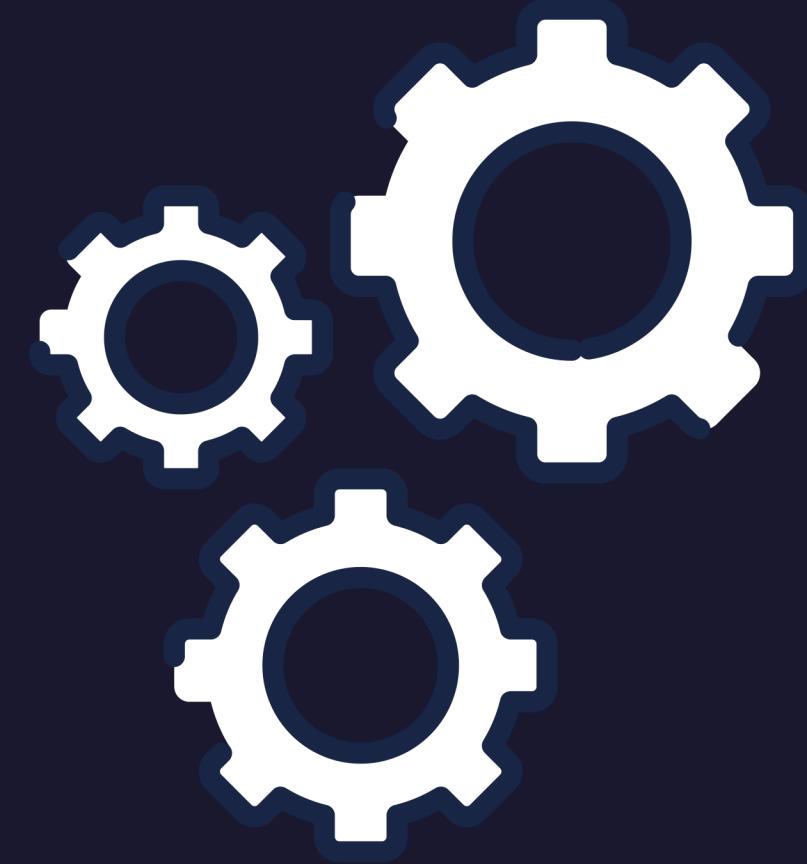
Our Goals

- Gather the data
- Data Preprocessing
- Exploratory Data Analysis
- Model Selection
- Fitting the data to the models
- Evaluating the model
- Key Findings
- Conclusions



Gather the data:

- Appropriate data should be collected
- Essential Libraries should be imported
ex: Numpy
Pandas



Source:

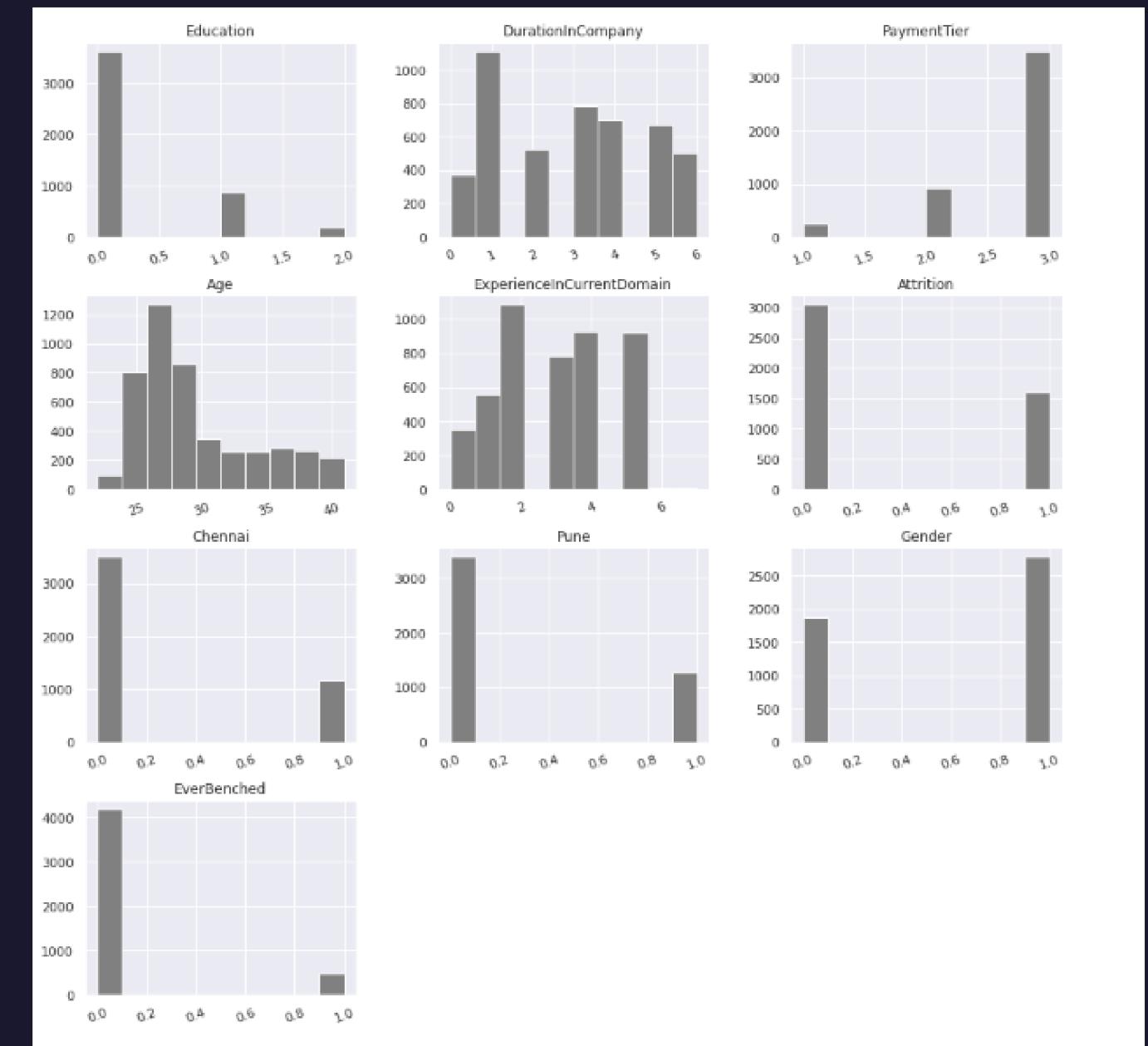
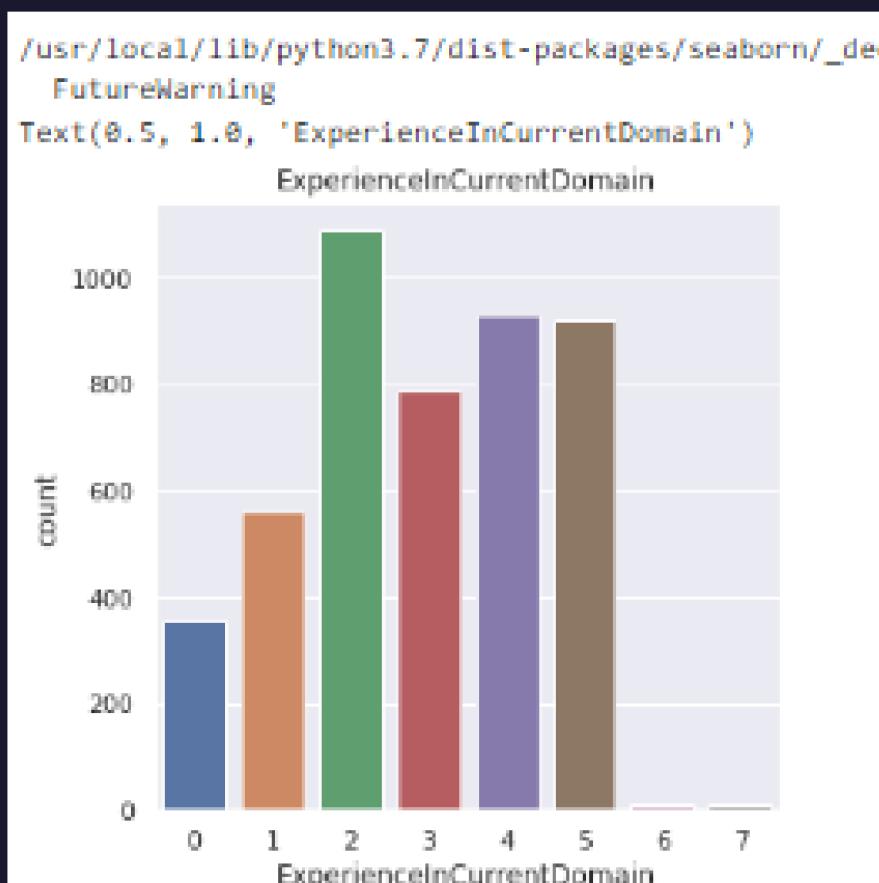
https://docs.google.com/spreadsheets/d/1wcZO1miV79sWafo58U-csfKzh_Ybb9F1vuOrvYp2wi4/edit?usp=sharing

Data preprocessing

- Analyze the data
- Clean the data
- Check for Duplicates/Null
- Display correlation b/w the categories

Exploratory data analysis :

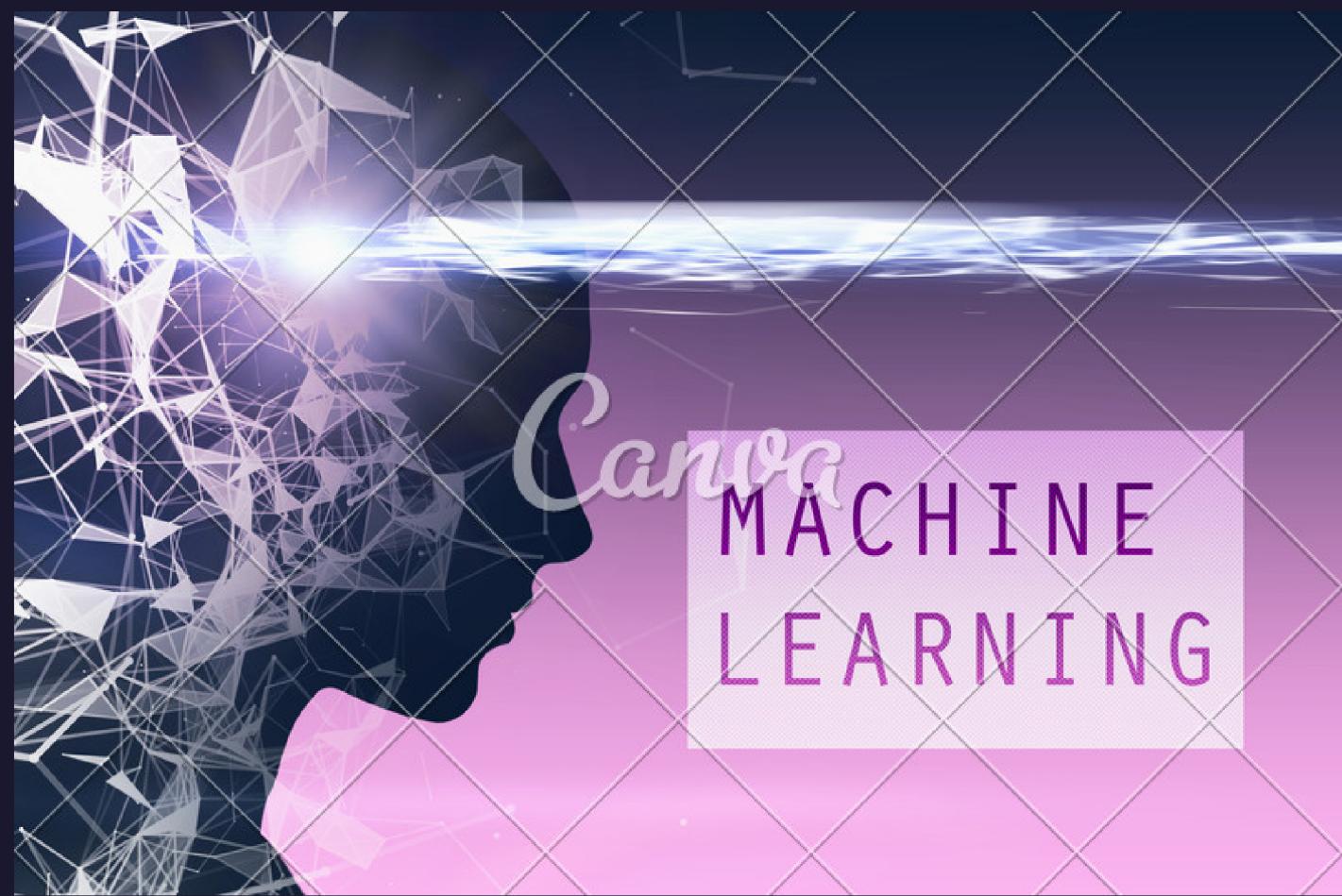
- Visualize the data
- Represent it using a graph
- Summarize the main factors



Model Selection :

The Data is fit for the Classification algorithms such as :

- Decision Tree Algorithm
- Random Forest Algorithm
- Logistics Regression Algorithm
- Support Vector Machine Algrithm
- K-neighbours Algorithm
- Naive Bayes



Data Training :

In machine learning, training data is the data you use to train a machine learning algorithm or model. Training data requires some human involvement to analyze or process the data for machine learning use.

- Decision Tree Algorithm
- Random Forest Algorithm
- Logistics Regression Algorithm
- Support Vector Machine Algrithm
- K-neighbours Algorithm



Data Testing :

Test data is used to measure the accuracy and efficiency of the algorithm used to train the machine - to see how well it can predict new answers based on its training. a little bit of body text

The Performance of Model can be Evaluated by using these :

- Accuracy score
- Confusion matrix
- Classification report



Performance score of various algorithms

01

Decision Tree Algorithm

Accuracy of the model using Decision tree classifier is 81

02

Random Tree Algorithm

Accuracy of the model using Random tree Classifier is 83

03

Support Vector Machine Algorithm

Accuracy of the model using Support Vector Machine algorithm is 62

04

Logistic Regression Algorithm

Accuracy of the model using logistic Regression is 71

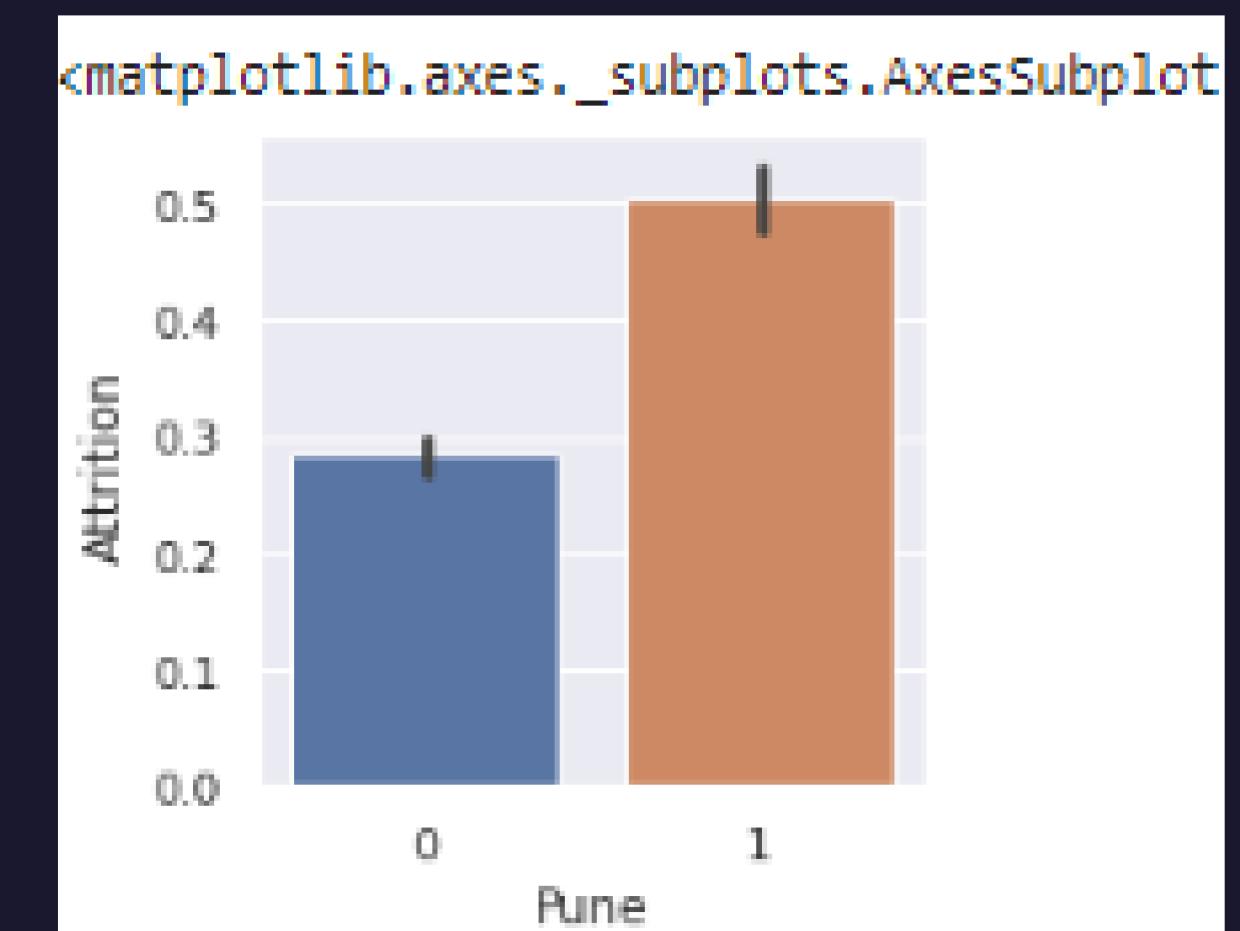
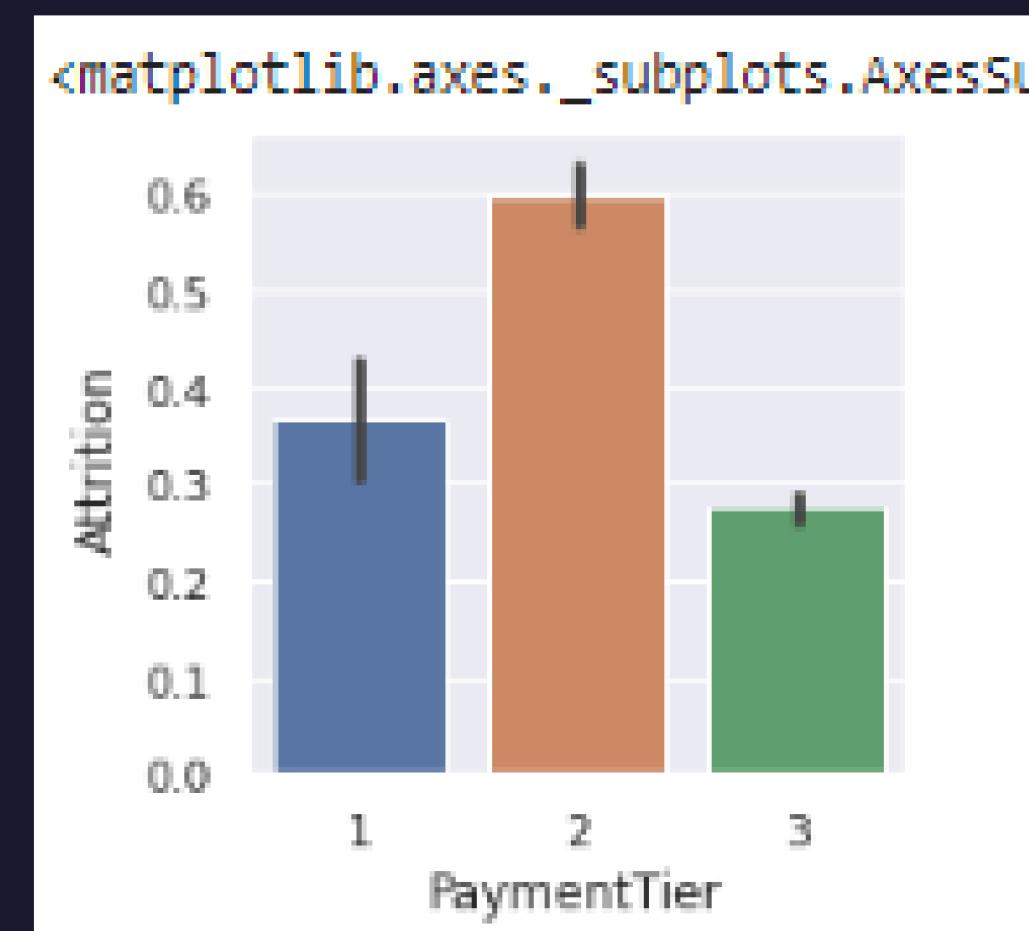
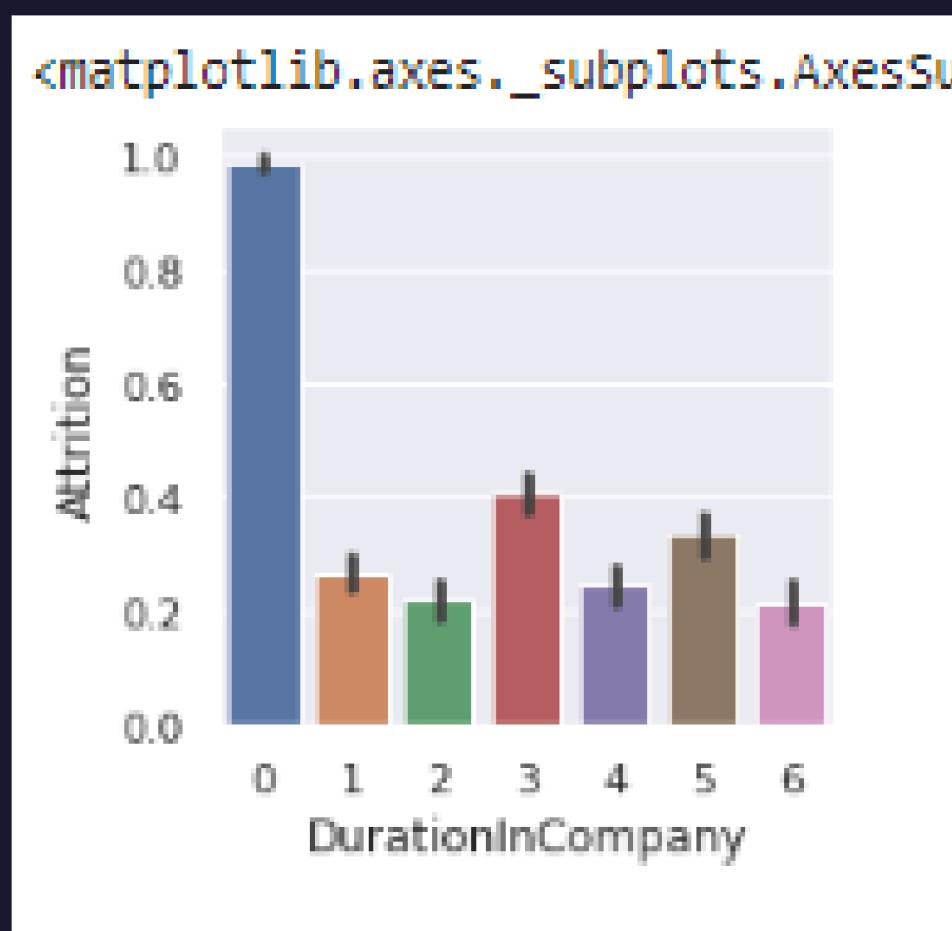


key factors :



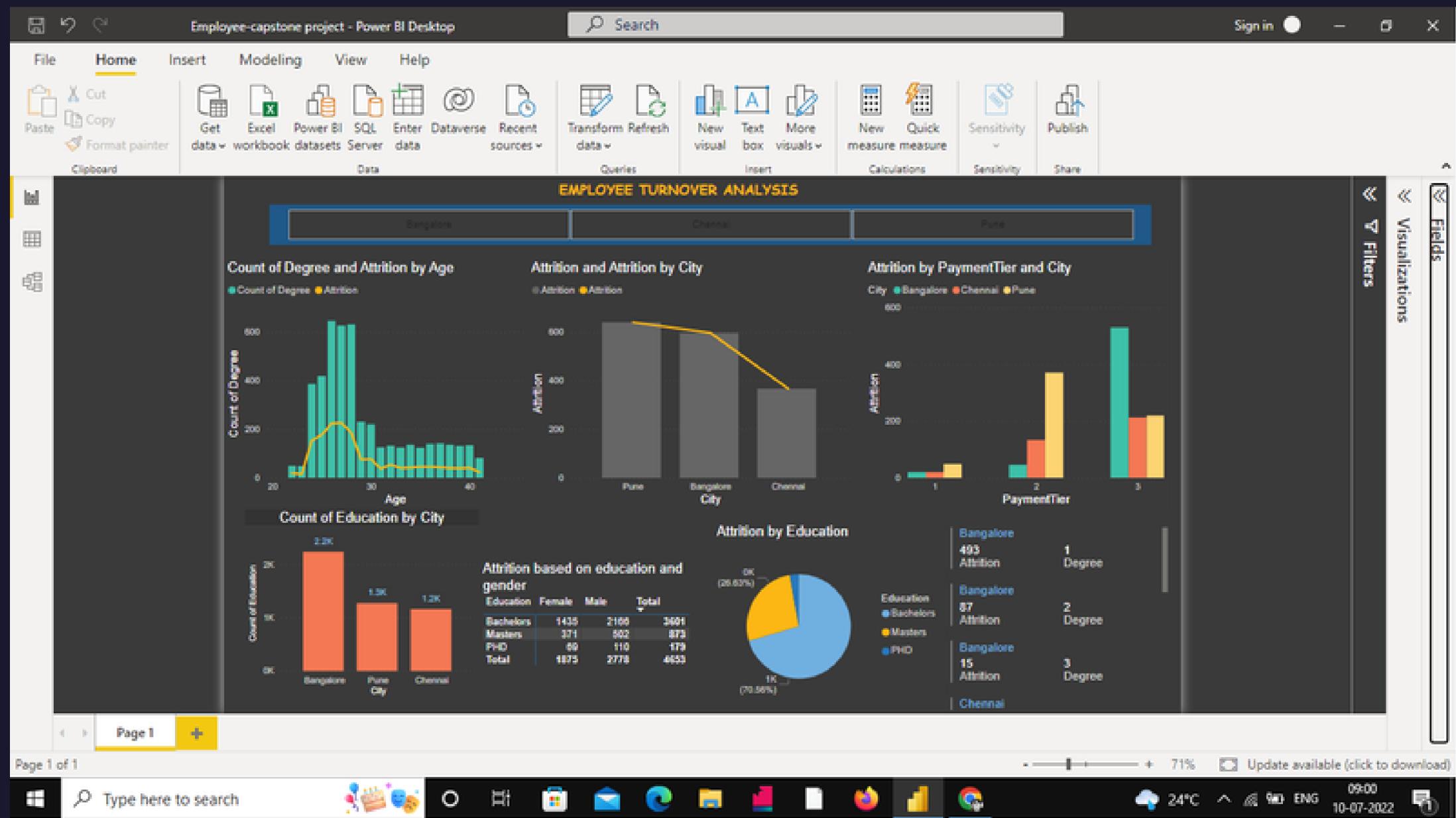
CATEGORIES THAT CONTRIBUTE THE MOST TO WHETHER THE EMPLOYEE IS GOING TO TURNOVER:

1. DurationInCompany
2. PaymentTier
3. Office in Pune



Power Bi visuals :

Power BI is a collection of software services, apps, and connectors that work together to turn your unrelated sources of data into coherent, visually immersive, and interactive insights.



Conclusions :

HOW THE PROBLEM OF EMPLOYEE TURNOVER CAN
BE RECTIFIED BY PROVIDING :

- 1.The higher the payment rate
- 2.Higher the Duration in company
- 3.Comfortable environment for the employees



Thank you !

