

Date	4 november
Team ID	PNT2022TMID43140
Project Name	Corporate Employee Attrtition Analytics

```

import math, time, random, datetime

# data analysis and wrangling
import pandas as pd
import numpy as np
from pandas_profiling import ProfileReport

# visualization
import seaborn as sns
import matplotlib.pyplot as plt
plt.style.use('seaborn-whitegrid')

#import for interactive plotting
import plotly.offline as py
py.init_notebook_mode(connected=True)
import plotly.graph_objs as go
import plotly.tools as tls
import plotly.figure_factory as ff
from plotly.subplots import make_subplots
%matplotlib inline

```

```

df = pd.read_csv("Data/WA_Fn-UseC_-HR-Employee-Attrition.csv")

[ ] df.head()

```

	Age	Attrition	BusinessTravel	DailyRate	Department	DistanceFromHome	Education	EducationField	EmployeeCount	EmployeeNumber	...	Relative
0	41	Yes	Travel_Rarely	1102	Sales	1	2	Life Sciences	1	1	...	
1	49	No	Travel_Frequently	279	Research & Development	8	1	Life Sciences	1	2	...	
2	37	Yes	Travel_Rarely	1373	Research & Development	2	2	Other	1	4	...	
3	33	No	Travel_Frequently	1392	Research & Development	3	4	Life Sciences	1	5	...	

```
<!DOCTYPE html>

<html >

<head>

  <meta charset="UTF-8">

  <title>Employee Attrition Prediction</title>

  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet' type='text/css'>

  <link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet' type='text/css'>

  <link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet' type='text/css'>

  <link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300' rel='stylesheet'
type='text/css'>


</head>


<body>

<div class="login">


<h1>Predict Attrition</h1>


<!-- Main Input For Receiving Query to our ML -->

<form action="{{ url_for('predict')}}" method="POST" autocomplete="on">


  <strong>Age</strong> : <input type="number" name="Age" placeholder="18-80" required
min="18" max="80"><br><br>


  <strong>BusinessTravel</strong> : <input type="radio" name="BusinessTravel" id="Rarely"
value="Rarely">Rarely      <input type="radio" name="BusinessTravel" id="Frequently"
```

value="Frequently"> Frequently<input type="radio" name="BusinessTravel" id="No Travel" value="No Travel">No Travel<br><br>

<strong>Daily Rate</strong> : <input type="number" name="Daily Rate" placeholder="100-1600" required min="100" max="1600" size="30"><br><br>

<strong>Department</strong> :<input type="radio" name="Department" id="Research & Development" value="Research & Development">Research & Development <input type="radio" name="Department" id="Human Resources" value="Human Resources">Human Resources <input type="radio" name="Department" id="Sales" value="Sales">Sales<br><br>

<strong>Distance From Home</strong> : <input type="number" name="Distance From Home" placeholder="1-29" required min="1" max="29"><br><br>

<strong>Education</strong> : <input type="number" name="Education" placeholder="1-5" required min="1" max="5"><br><br>

<strong>Education Field</strong> : <input type="radio" name="Education Field" id="Life Sciences" value="Life Sciences">Life Sciences <input type="radio" name="Education Field" id="Medical" value="Medical">Medical <input type="radio" name="Education Field" id="Marketing" value="Marketing">Marketing <input type="radio" name="Education Field" id="Technical Degree" value="Technical Degree">Technical Degree <input type="radio" name="Education Field" id="Human Resources" value="Human Resources">Human Resources <input type="radio" name="Education Field" id="Other" value="Other">Other <br><br>

<strong>Environment Satisfaction</strong> : <input type="number" name="Environment Satisfaction" placeholder="1-4" required min="1" max="4"><br><br>

<strong>Gender</strong> : <input type="radio" name="Gender" id="Male" value="Male">Male <input type="radio" name="Gender" id="Female" value="Female">Female<br><br>

**Hourly Rate** :

**Job Involvement** :

**Job Level** :

**Job Role** : ☐Sales Executive ☐Research Scientist ☐Laboratory Technician ☐Manufacturing Director ☐Healthcare Representative ☐Manager ☐Sales Representative ☐Research Director ☐Human Resources

**Job Satisfaction** :

**Marital Status** : ☐Married ☐Single ☐Divorced

**Monthly Income** :  (1000-20000)

**Number of Companies Worked in** :

<strong>Over Time</strong> : <input type="radio" name="Over Time" id="Yes" value="Yes">Yes  
<input type="radio" name="Over Time" id="No" value="No">No<br><br>

<strong>Performance Rating</strong> : <input type="number" name="Performance Rating"  
placeholder="1-4" required min="1" max="4"><br><br>

<strong>Relationship Satisfaction</strong> : <input type="number" name="Relationship  
Satisfaction" placeholder="1-4" required min="1" max="4"><br><br>

<strong>Stock Option Level</strong> : <input type="number" name="Stock Option Level"  
placeholder="0-3" required min="0" max="3"><br><br>

<strong>Total Working Years</strong> : <input type="number" name="Total Working Years"  
placeholder="0-40" required min="0" max="40"><br><br>

<strong>Training Times Last Year</strong> : <input type="number" name="Training Times Last  
Year" placeholder="0-6" required min="0" max="6"><br><br>

<strong>Work Life Balance</strong> : <input type="number" name="Work Life Balance"  
placeholder="1-4" required min="1" max="4"><br><br>

<strong>Years At Company</strong> : <input type="number" name="Years At Company"  
placeholder="0-40" required min="0" max="40"><br><br>

<strong>Years In Current Role</strong> : <input type="number" name="Years In Current Role"  
placeholder="0-18" required min="0" max="18"><br><br>

<strong>Years Since Last Promotion</strong> : <input type="number" name="Years Since Last Promotion" placeholder="0-15" required min="0" max="15"><br><br>

<strong>Years With Curr Manager</strong> : <input type="number" name="Years With Curr Manager" placeholder="0-17" required min="0" max="17"><br><br>

<br><button type="submit" class="btn btn-primary btn-block btn-large">Predict</button>

</form>

<br>

<br>

<h1>{{ prediction\_text }}</h1>

</div>

</body>

</html>

# Predict Attrition

Age :

BusinessTravel : ☐ Rarely ☐ Frequently ☐ No Travel

Daily Rate :

Department : ☐ Research & Development ☐ Human Resources ☐ Sales

Distance From Home :

Education :

Education Field : ☐ Life Sciences ☐ Medical ☐ Marketing ☐ Technical Degree ☐ Human Resources ☐ Other

Environment Satisfaction :

Gender : ☐ Male ☐ Female

Hourly Rate :

Job Involvement :

Job Level :

Job Role : ☐ Sales Executive ☐ Research Scientist ☐ Laboratory Technician ☐ Manufacturing Director ☐ Healthcare Representative ☐ Manager ☐ Sales Representative ☐ Research Director ☐ Human Resources

Job Satisfaction :

Marital Status : ☐ Married ☐ Single ☐ Divorced

Monthly Income :  (1000-20000)

Number of Companies Worked in :

Over Time : ☐ Yes ☐ No

## Resources

Job Satisfaction :

Marital Status : ☐ Married ☐ Single ☐ Divorced

Monthly Income :  (1000-20000)

Number of Companies Worked in :

Over Time : ☐ Yes ☐ No

Performance Rating :

Relationship Satisfaction :

Stock Option Level :

Total Working Years :

Training Times Last Year :

Work Life Balance :

Years At Company :

Years In Current Role :

Years Since Last Promotion :

Years With Curr Manager :

{{ prediction\_text }}

```
<!doctype html>

<!-- Website template by freewebsitetemplates.com -->

<html>

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Data Analytics</title>

    <link rel="stylesheet" href="css/style.css" type="text/css">

    <link rel="stylesheet" type="text/css" href="css/mobile.css">

    <script src="js/mobile.js" type="text/javascript"></script>

    <meta name="viewport" content="width=device-width, initial-scale=1">

<style>

* {box-sizing: border-box;}

body {font-family: Verdana, sans-serif;}

.mySlides {display: none;}

img {vertical-align: middle;}

/* Slideshow container */

.slideshow-container {

    max-width: 1000px;

    position: relative;

    margin: auto;

}
```



```
/* Caption text */
```

```
.text {  
  
    color: #f2f2f2;  
  
    font-size: 15px;  
  
    padding: 8px 12px;  
  
    position: absolute;  
  
    bottom: 8px;  
  
    width: 100%;  
  
    text-align: center;  
  
}
```

```
/* Number text (1/3 etc) */
```

```
.numbertext {  
  
    color: #f2f2f2;  
  
    font-size: 12px;  
  
    padding: 8px 12px;  
  
    position: absolute;  
  
    top: 0;  
  
}
```

```
/* The dots/bullets/indicators */
```

```
.dot {  
  
    height: 15px;  
  
    width: 15px;  
  
    margin: 0 2px;
```

```
background-color: #bbb;

border-radius: 50%;

display: inline-block;

transition: background-color 0.6s ease;

}
```

```
.active {

background-color: #717171;

}
```

```
/* Fading animation */
```

```
.fade {

animation-name: fade;

animation-duration: 1.5s;

}
```

```
@keyframes fade {

from {opacity: .4}

to {opacity: 1}

}
```

```
/* On smaller screens, decrease text size */
```

```
@media only screen and (max-width: 300px) {

.text {font-size: 11px}

}
```

</style>

</head>

<body>

<div id="body">

<div class="header">

<div>

<h1>DATA ANALYTICS</h1>

</div>

</div>

<div class="blog">

<div class="featured">

<ul>

<h2>Sample images</h2>

<p>Analysis in cognos</p>

<div class="slideshow-container">

<div class="mySlides fade">

<div class="numbertext">1 / 3</div>



```
<div class="text">Caption Text</div>

</div>
```

```
<div class="mySlides fade">

  <div class="numbertext">2 / 3</div>

  

  <div class="text">Caption Two</div>

</div>
```

```
<div class="mySlides fade">

  <div class="numbertext">3 / 3</div>

  

  <div class="text">Caption Three</div>

</div>
```

```
</div>

<br>
```

```
<div style="text-align:center">

  <span class="dot"></span>

  <span class="dot"></span>

  <span class="dot"></span>

</div>
```

```
<script>
```

```
let slideIndex = 0;
```

```
showSlides();
```

```
function showSlides() {
```

```
    let i;
```

```
    let slides = document.getElementsByClassName("mySlides");
```

```
    let dots = document.getElementsByClassName("dot");
```

```
    for (i = 0; i < slides.length; i++) {
```

```
        slides[i].style.display = "none";
```

```
    }
```

```
    slideIndex++;
```

```
    if (slideIndex > slides.length) {slideIndex = 1}
```

```
    for (i = 0; i < dots.length; i++) {
```

```
        dots[i].className = dots[i].className.replace(" active", "");
```

```
    }
```

```
    slides[slideIndex-1].style.display = "block";
```

```
    dots[slideIndex-1].className += " active";
```

```
    setTimeout(showSlides, 3000); // Change image every 2 seconds
```

```
}
```

```
</script>
```

```
<li>
```

```
<div>
```

```
<h1>DATA ANALYTICS BY IBM
```

```
COGNOS</h1>
```

<p>WE CAN SEE THE DASH BOARD BY  
CLICKING THESE AND LOGON TO COGNOS</p>

<a  
href="https://login.ibm.com/authsvc/mtfim/sps/authsvc?PolicyId=urn:ibm:security:authentication:asf:b  
asicldapuser&Target=https%3A%2F%2Flogin.ibm.com%2Foidc%2Fendpoint%2Fdefault%2Fauthorize%3F  
qsId%3Dbcb0d44a-9f2d-48cf-bb43-311c1b29486d%26client\_id%3DMyIBMLondonProdCl"  
class="more">VIEW DASHBOARD</a>

</div>

</li>

<li>

<div>

<h1>SAMPLES OF THE IBM  
COGNOS</h1>

<iframe  
src="https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my\_folders%2FPhar  
ma%2BDashboard&closeWindowOnLastView=true&ui\_appbar=false&ui\_navbar=false&a  
mp;shareMode=embedded&action=view&mode=dashboard&subView=model00000183  
829e6992\_00000000" width="320" height="200" frameborder="0" gesture="media" allow="encrypted-  
media" allowfullscreen=""></iframe>

</div>

</li>

</ul>

</div>

</div>

</div>

```

<div id="footer">

    <div>

        <div class="connect">

            <a href="http://facebook.com/"
class="facebook">facebook</a>

            <a href="http://twitter.com/" class="twitter">twitter</a>

            <a href="http://googleplus.com/"
class="googleplus">googleplus</a>

            <a href="http://pinterest.com" class="pinterest">pinterest</a>

        </div>

        <p>&copy; 2023 Employee attrtion. All Rights Reserved.</p>

    </div>

</div>

</div>

</body>

</html>

```



