CIA 3 – ML Model with Modular Coding

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Class : 3 MDS B

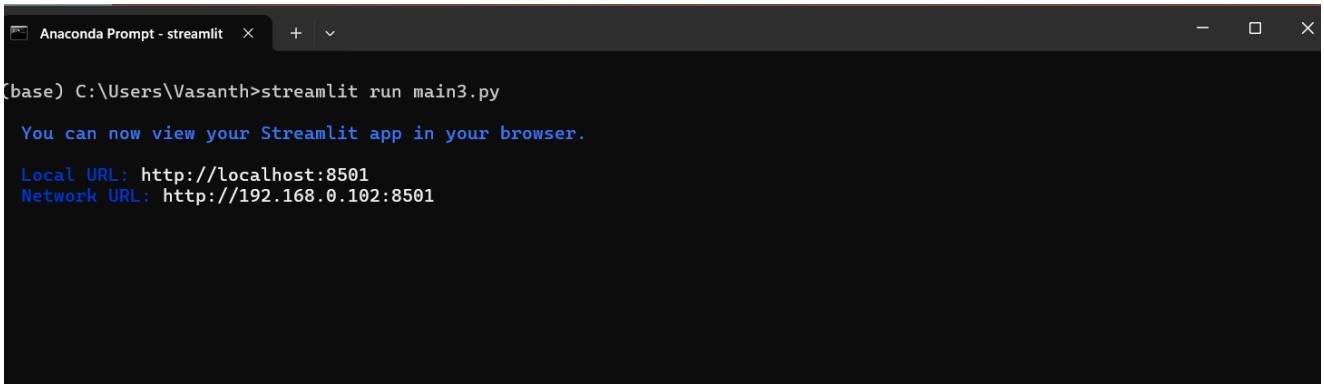
Reg No : 2348463

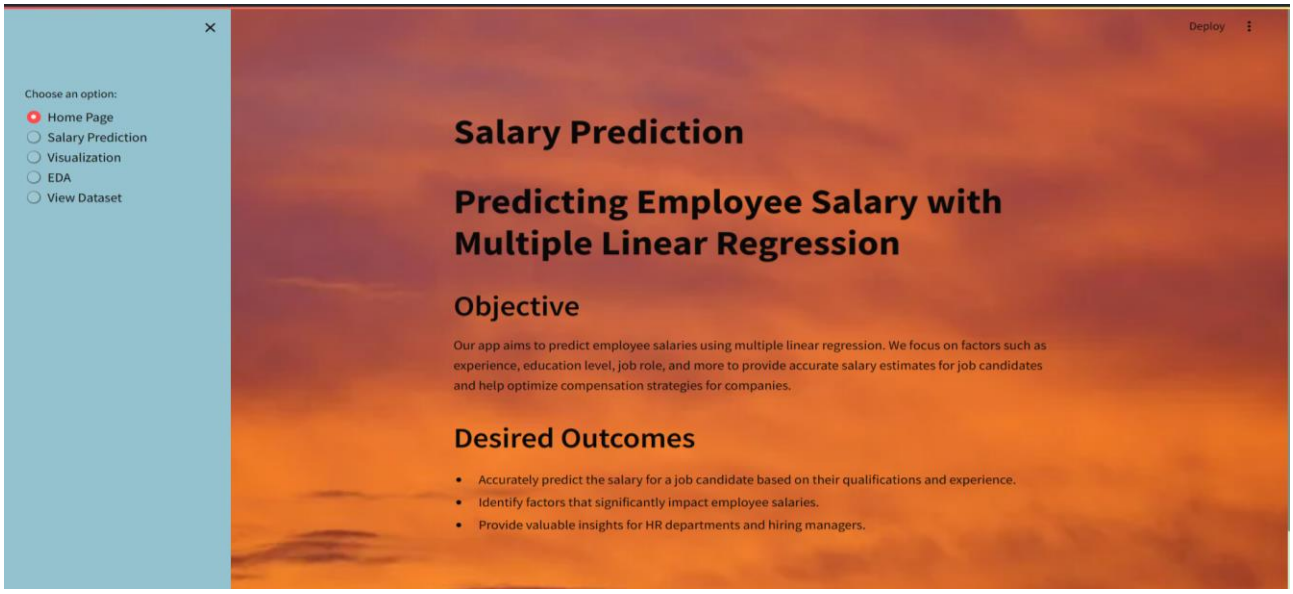
Predicting Employee Salary with Multiple Linear Regression

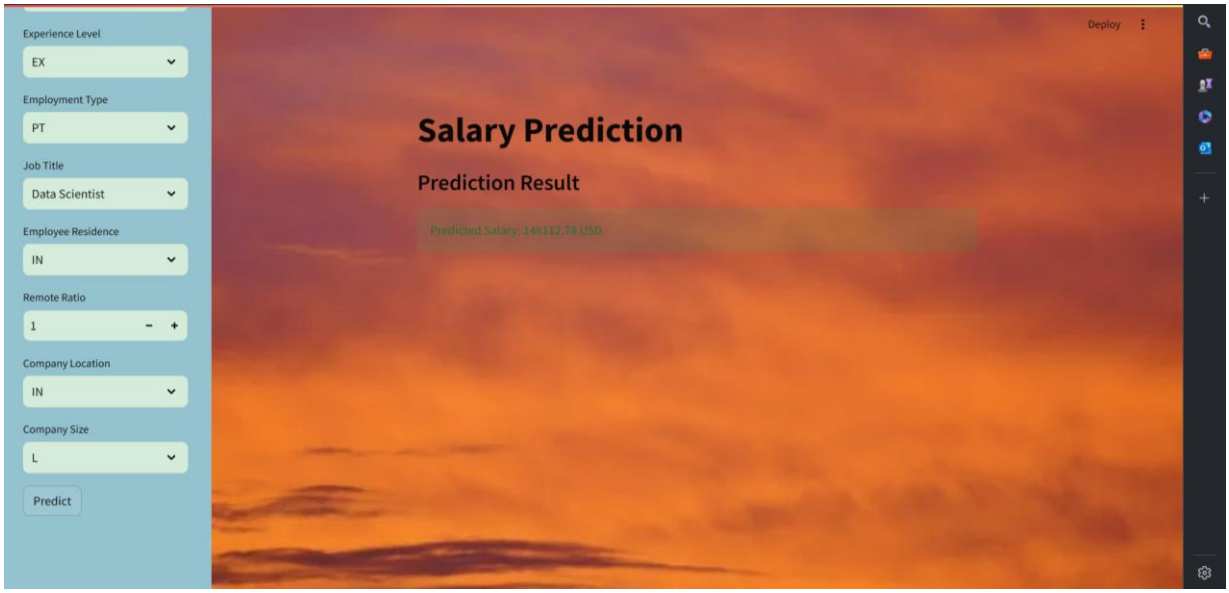
AIM:

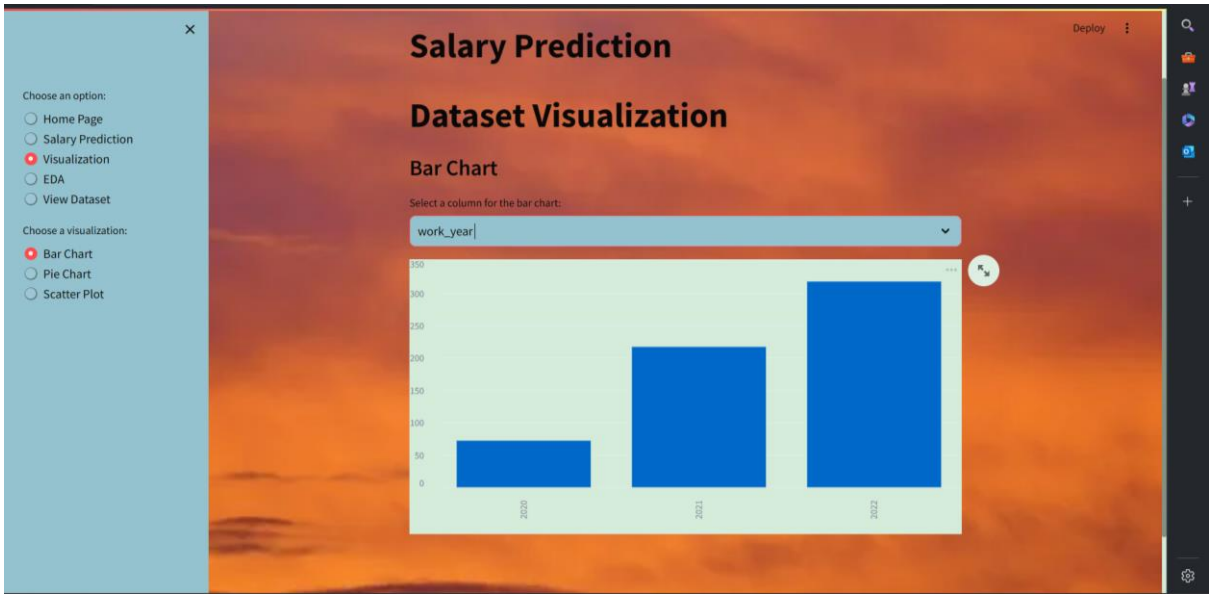
To develop a model using simple linear regression to predict employee salaries based on various factors such as experience, education level, job role, etc., with the aim of providing.

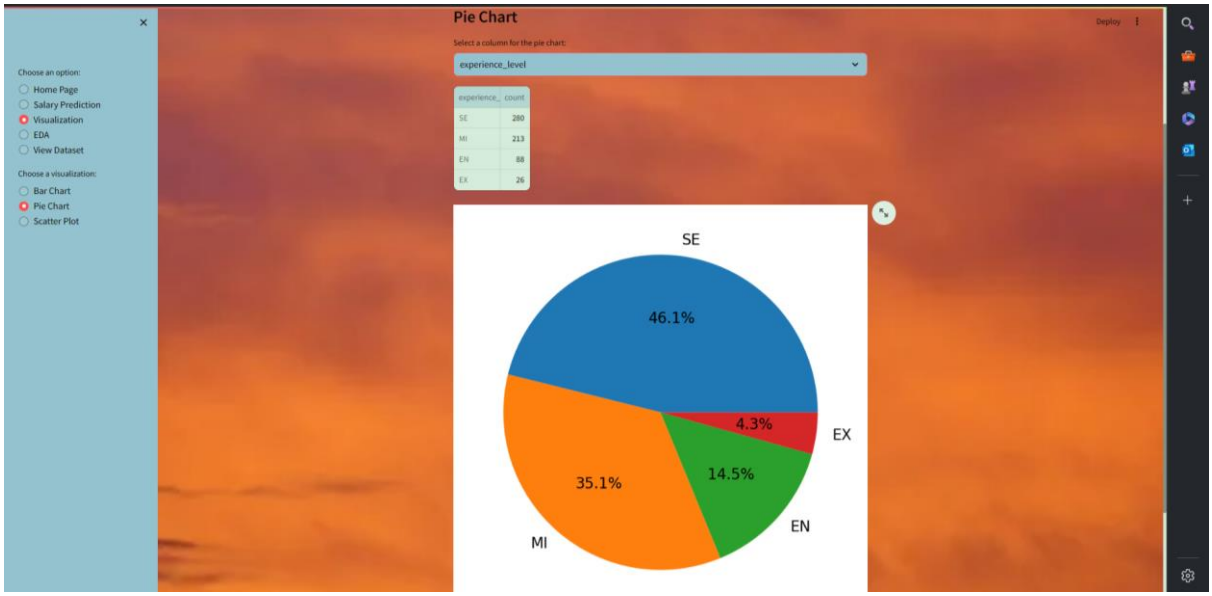
OUTPUT:

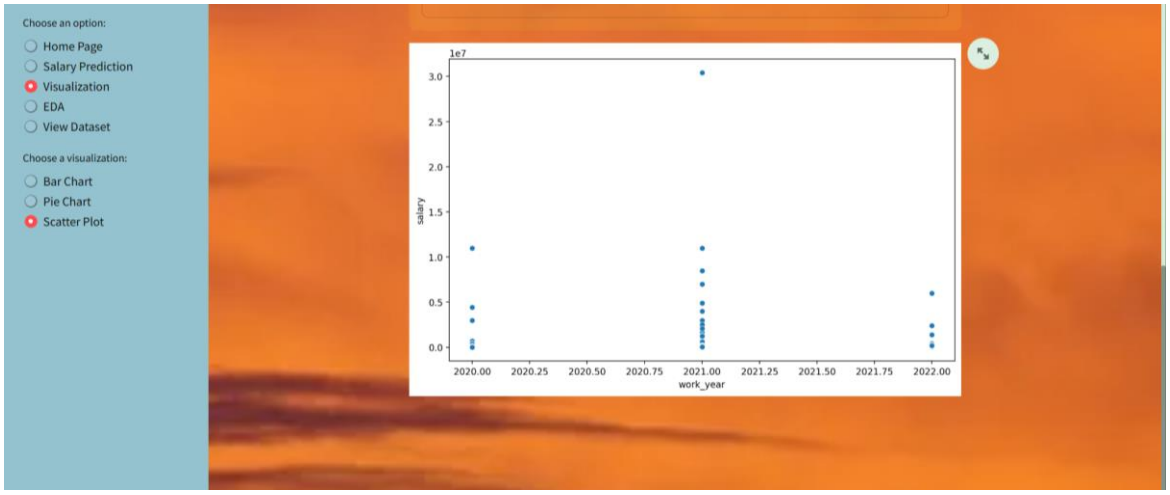


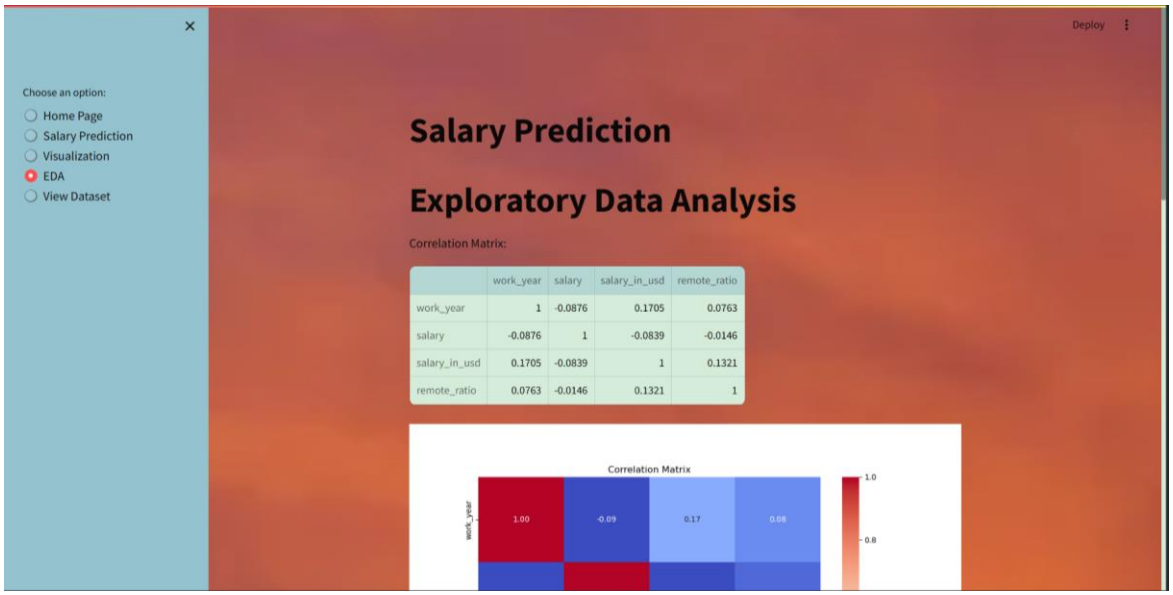

Deploy
Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Salary Prediction
Predicting Employee Salary with Multiple Linear Regression
Objective
Our app aims to predict employee salaries using multiple linear regression. We focus on factors such as experience, education level, job role, and more to provide accurate salary estimates for job candidates and help optimize compensation strategies for companies.
Desired Outcomes
Accurately predict the salary for a job candidate based on their qualifications and experience.
Identify factors that significantly impact employee salaries.
Provide valuable insights for HR departments and hiring managers.


Deploy
Experience Level
EX
Employment Type
PT
Job Title
Data Scientist
Employee Residence
IN
Remote Ratio
1
Company Location
IN
Company Size
L
Predict
Salary Prediction
Prediction Result
Predicted Salary: 148112.78 USD

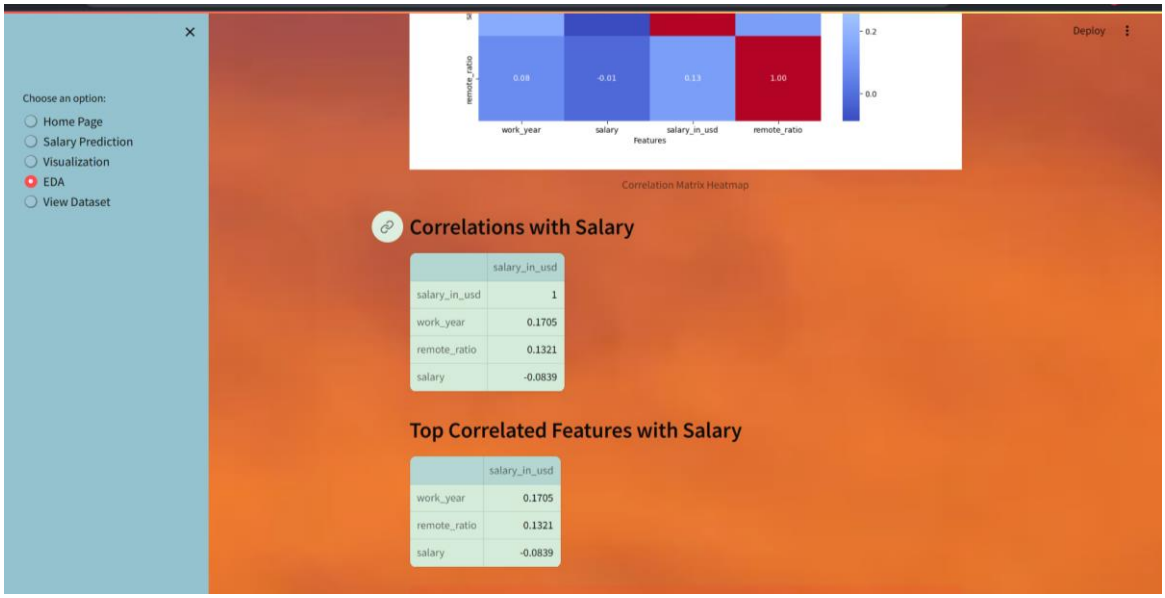

Salary Prediction
Dataset Visualization
Bar Chart
Select a column for the bar chart:
work_year
Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Choose a visualization:
Bar Chart
Pie Chart
Scatter Plot
Deploy
150
300
250
200
150
100
50
0
2020
2021
2022

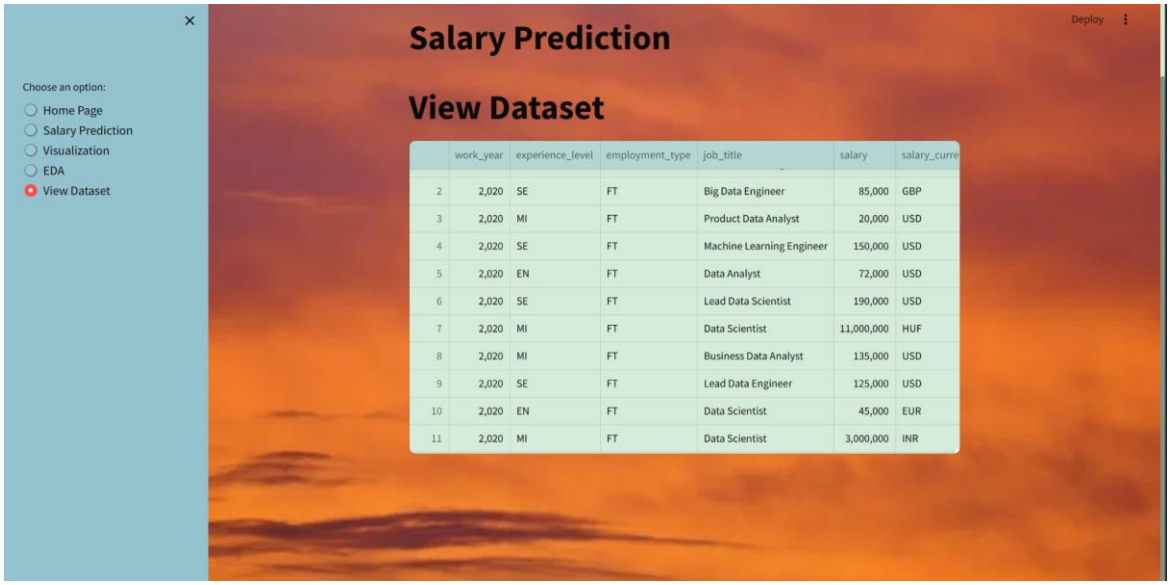

Pie Chart
Select a column for the pie chart:
experience_level
experience_ count
SE 280
MI 213
EN 88
EX 26
Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Choose a visualization:
Bar Chart
Pie Chart
Scatter Plot
Deploy
SE
46.1%
4.3%
EX
35.1%
14.5%
MI
EN


Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Choose a visualization:
Bar Chart
Pie Chart
Scatter Plot
1e7
3.0
2.5
2.0
1.5
1.0
0.5
0.0
salary
2020.00
2020.25
2020.50
2020.75
2021.00
2021.25
2021.50
2021.75
2022.00
work_year


Deploy
Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Salary Prediction
Exploratory Data Analysis
Correlation Matrix:
work_year salary salary_in_usd remote_ratio
work_year 1 -0.0876 0.1705 0.0763
salary -0.0876 1 -0.0839 -0.0146
salary_in_usd 0.1705 -0.0839 1 0.1321
remote_ratio 0.0763 -0.0146 0.1321 1
Correlation Matrix
work_year
1.00
-0.09
0.17
0.08
1.0
0.8

Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Deploy
salary_in_usd 0.1705 -0.0839 1 0.1321
remote_ratio 0.0763 -0.0146 0.1321 1
Correlation Matrix
work_year
salary
salary_in_usd
remote_ratio
Features
1.00 -0.09 0.17 0.08
-0.09 1.00 -0.08 -0.01
0.17 -0.08 1.00 0.13
0.08 -0.01 0.13 1.00
work_year
salary
salary_in_usd
remote_ratio
Features
1.0
0.8
0.6
0.4
0.2
0.0
Correlation Matrix Heatmap
Correlations with Salary


Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Deploy
remote_ratio
0.08 -0.01 0.13 1.00
work_year
salary
salary_in_usd
remote_ratio
Features
0.2
0.0
Correlation Matrix Heatmap
Correlations with Salary
salary_in_usd
salary_in_usd 1
work_year 0.1705
remote_ratio 0.1321
salary -0.0839
Top Correlated Features with Salary
salary_in_usd
work_year 0.1705
remote_ratio 0.1321
salary -0.0839


Choose an option:
Home Page
Salary Prediction
Visualization
EDA
View Dataset
Deploy
Salary Prediction
View Dataset
work_year experience_level employment_type job_title salary salary_curre
2 2,020 SE FT Big Data Engineer 85,000 GBP
3 2,020 MI FT Product Data Analyst 20,000 USD
4 2,020 SE FT Machine Learning Engineer 150,000 USD
5 2,020 EN FT Data Analyst 72,000 USD
6 2,020 SE FT Lead Data Scientist 190,000 USD
7 2,020 MI FT Data Scientist 11,000,000 HUF
8 2,020 MI FT Business Data Analyst 135,000 USD
9 2,020 SE FT Lead Data Engineer 125,000 USD
10 2,020 EN FT Data Scientist 45,000 EUR
11 2,020 MI FT Data Scientist 3,000,000 INR