Machine Learning Approach For Employee Performance Prediction With IBM

1. INTRODUCTION

1.1 Overview

In this project we are going to analyse and predict the performance of employees in an organization on the basis of various factors, including, but not limited to, individual and domain specific characteristics, nature and level of schooling, socioeconomic status and different psychological factors.

1.2 Purpose

The purpose of this project is to predict the performance of employee

2. LITERATURE SURVEY

2.1 Existing problem

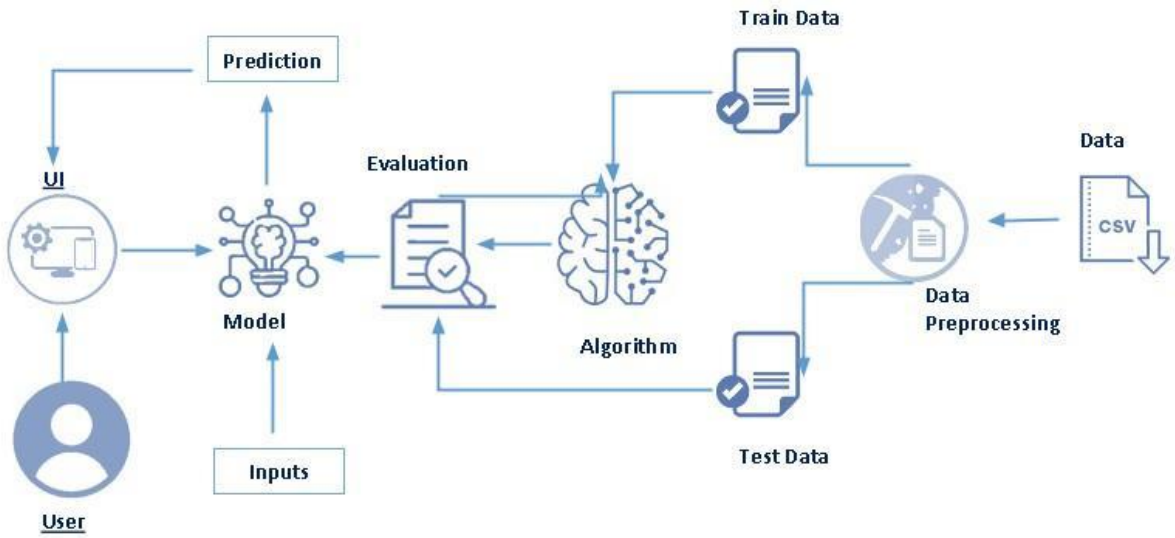
On previous system employee performance is calculated using paper works by evaluating the performance of the employee by hand.

2.2 Proposed solution

As an alternative to the existing problem this project is made to automate the performance of the employee.

3. THEORITICAL ANALYSIS

3.1 Block diagram



3.2 Hardware Minimum Requirement

1. CPU : PENTIUM III Processor
2. Memory : 128 MB
3. Cache : 512KB
4. Floppy Disk : 1.44MB
5. Hard Disk :4.3GB
6. Display : 15” Monitor
7. Key Board :Standard 108 keys Enhanced Key Board
8. Mouse :MS Serial Mouse

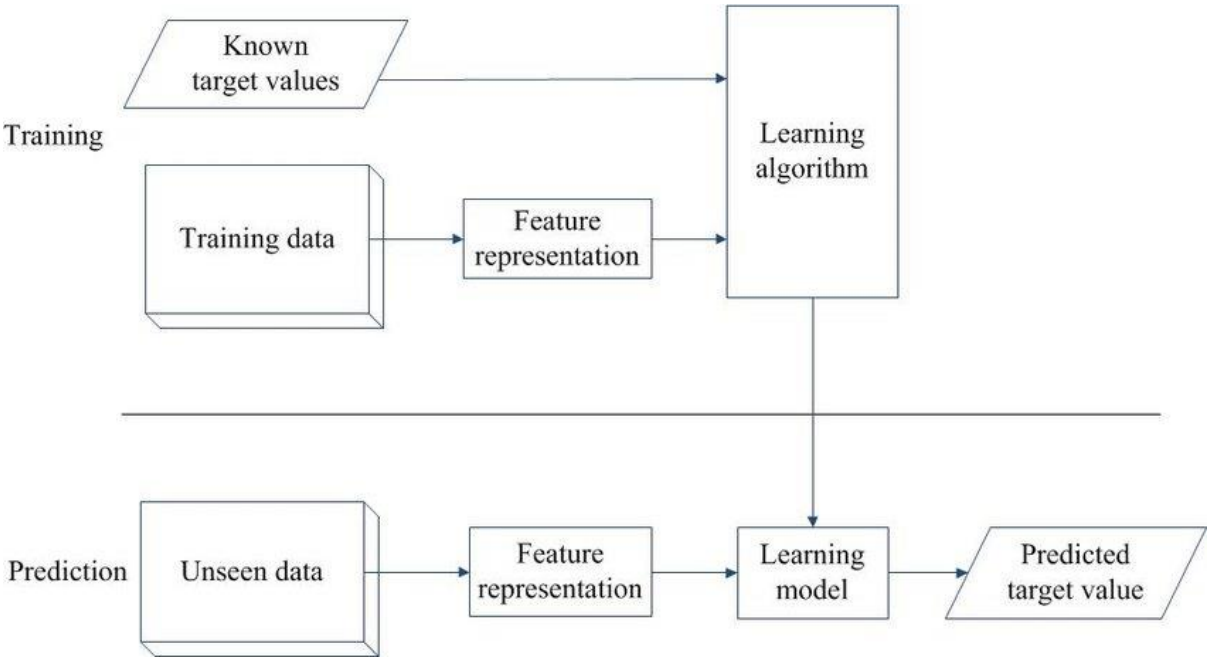
3.2 Software Minimum Requirement

1. Operating System : Windows XP, 7, 8 or above
2. Front Tool : PHP
3. Back End Tool :HTML

4. EXPERIMENTAL INVESTIGATIONS

Based on my analysis since the project is used with Supervised learning techniques namely Support Vector Machines, Random Forest, Naive Bayes, Neural Networks and Logistic Regression. The performance of the employee is analysed based on the number of days the employee works ,target productivity acquired, over time they worked, how many team members etc and the most accurate result is found out.

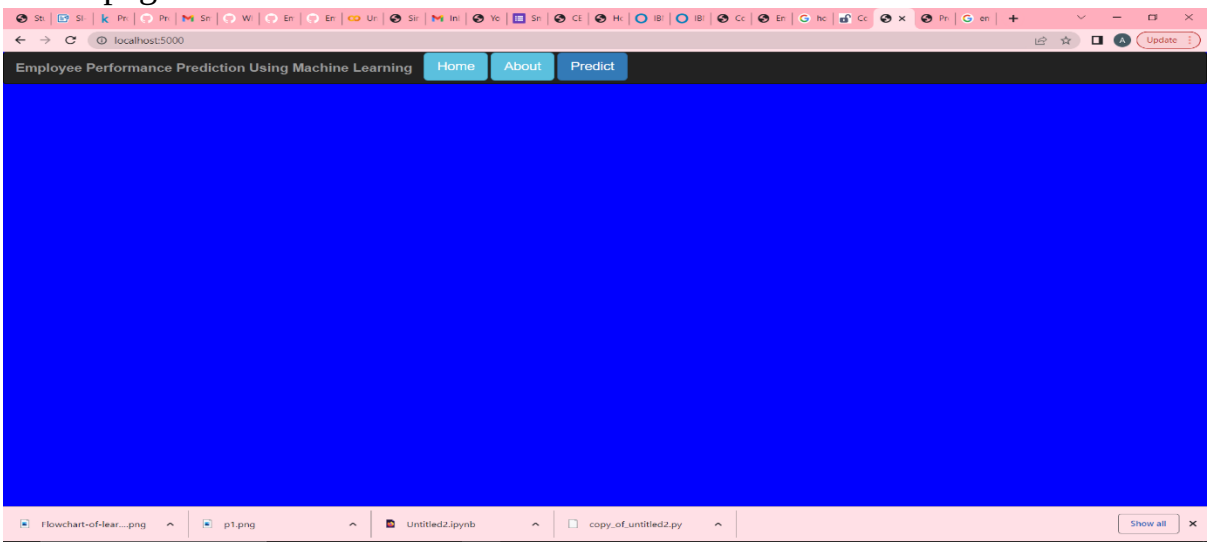
5. FLOWCHART



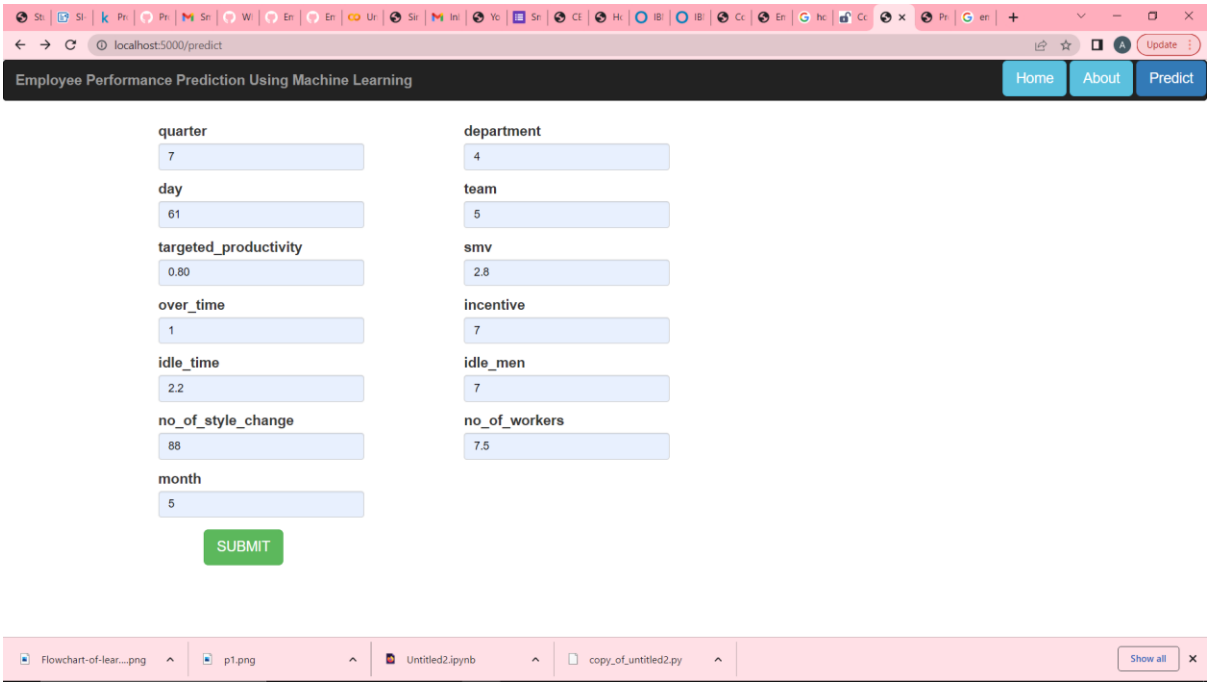
6. RESULT

Output 1

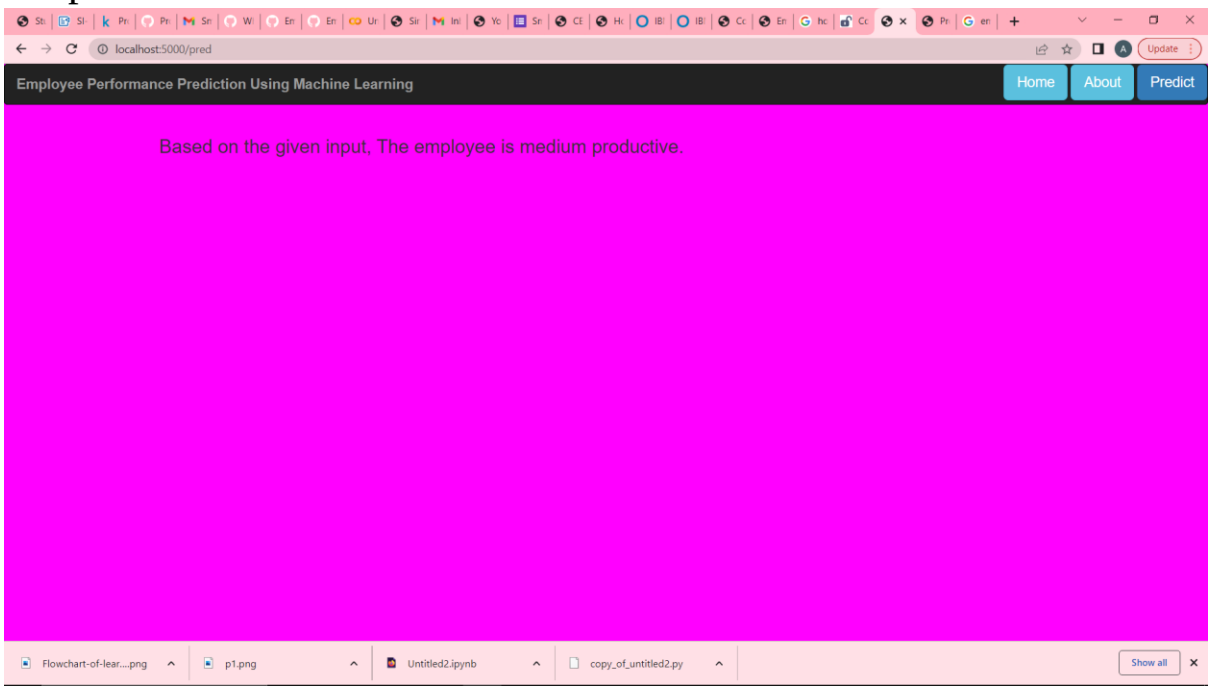
Home page



Input



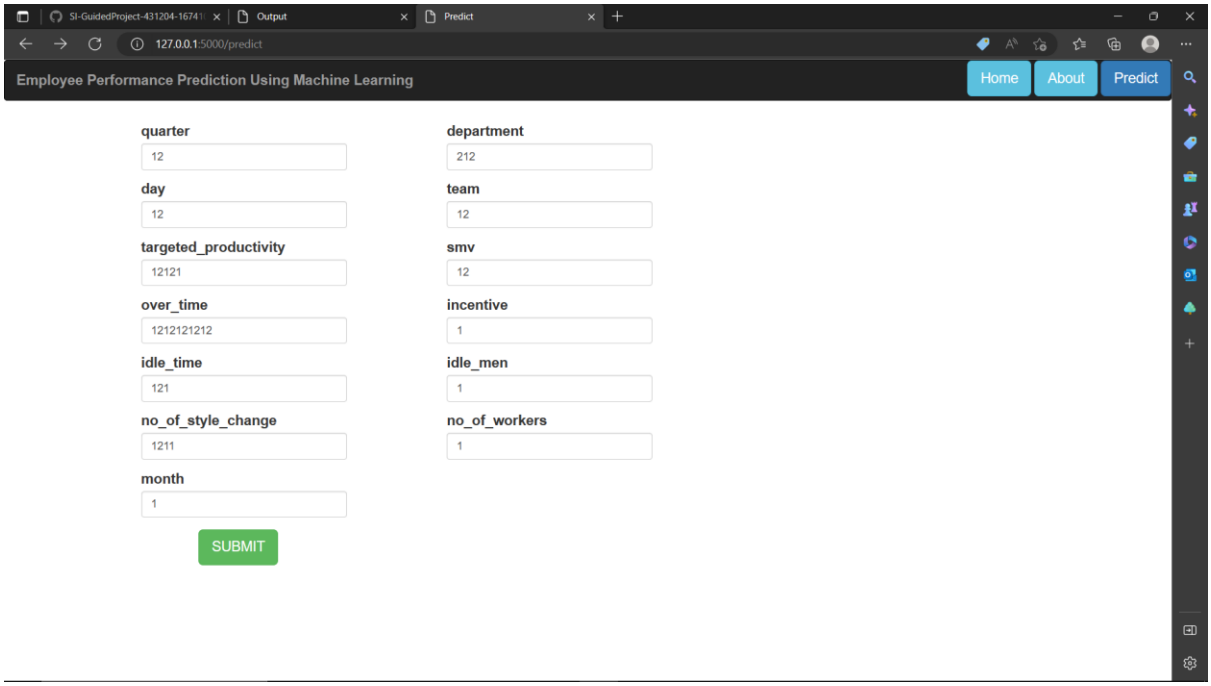
Output



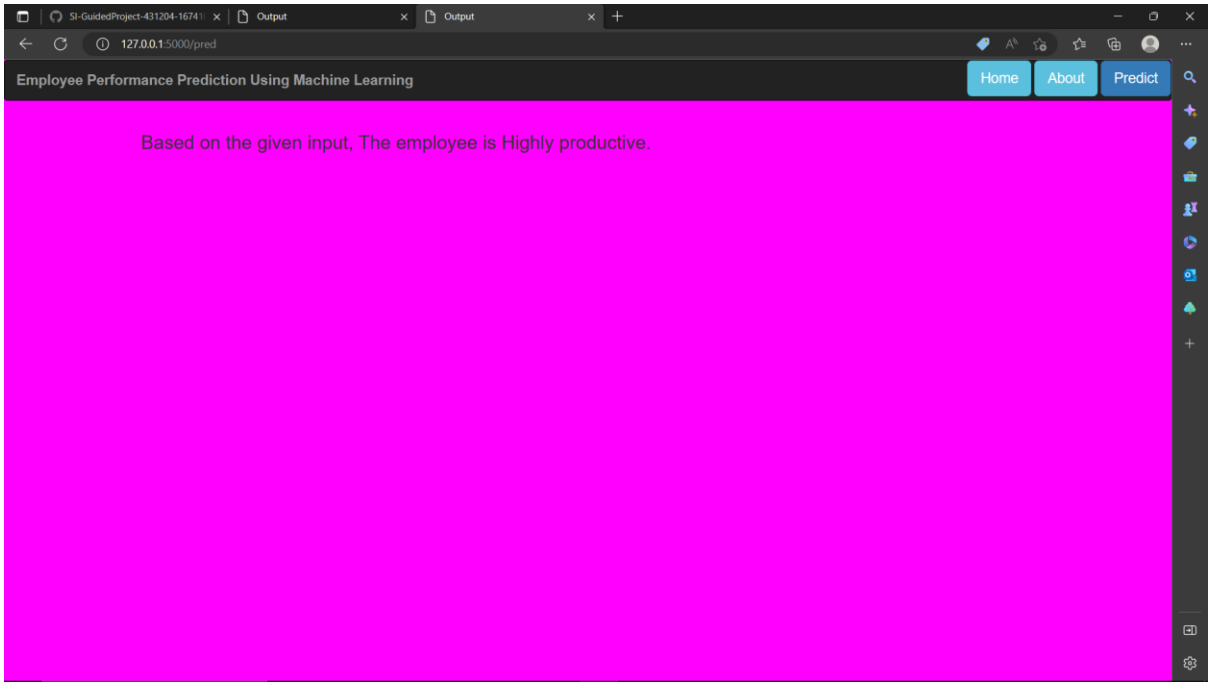
Medium productive

Output 2

input



output



Highly productive

7. ADVANTAGES

1. Provides clarity
2. Enhances efficiency
3. Promotes job satisfaction
4. Increases motivation
5. Enables objective decision-making
6. Helps plan for training needs

7. DISADVANTAGES

1. The absence of goal setting and defined milestones
2. Using performance management solely as a measurement tool
3. Establishing trust
4. Untrained managers
5. It’s an annual activity

8. APPLICATIONS

1. Attendance
2. Time management
3. Training
4. Initiative & innovation

9. CONCLUSION

This project analyse and predict the performance of employees in an organization on the basis of various factors, including, but not limited to, individual and domain specific characteristics, nature and level of schooling, socioeconomic status and different psychological factors. The performance is evaluated successfully.

10. FUTURE SCOPE

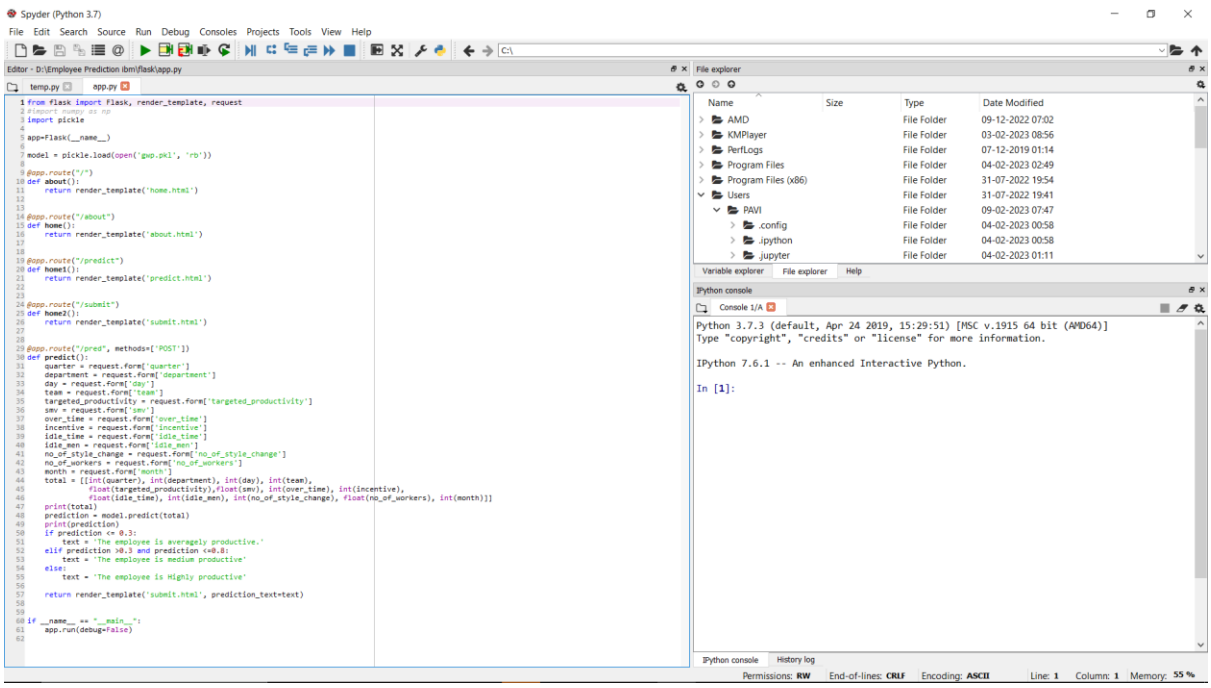
Provide employees with a better understanding of their role and responsibilities. Increase confidence through recognizing strengths while identifying training needs to improve weaknesses.

11. BIBILOGRAPHY

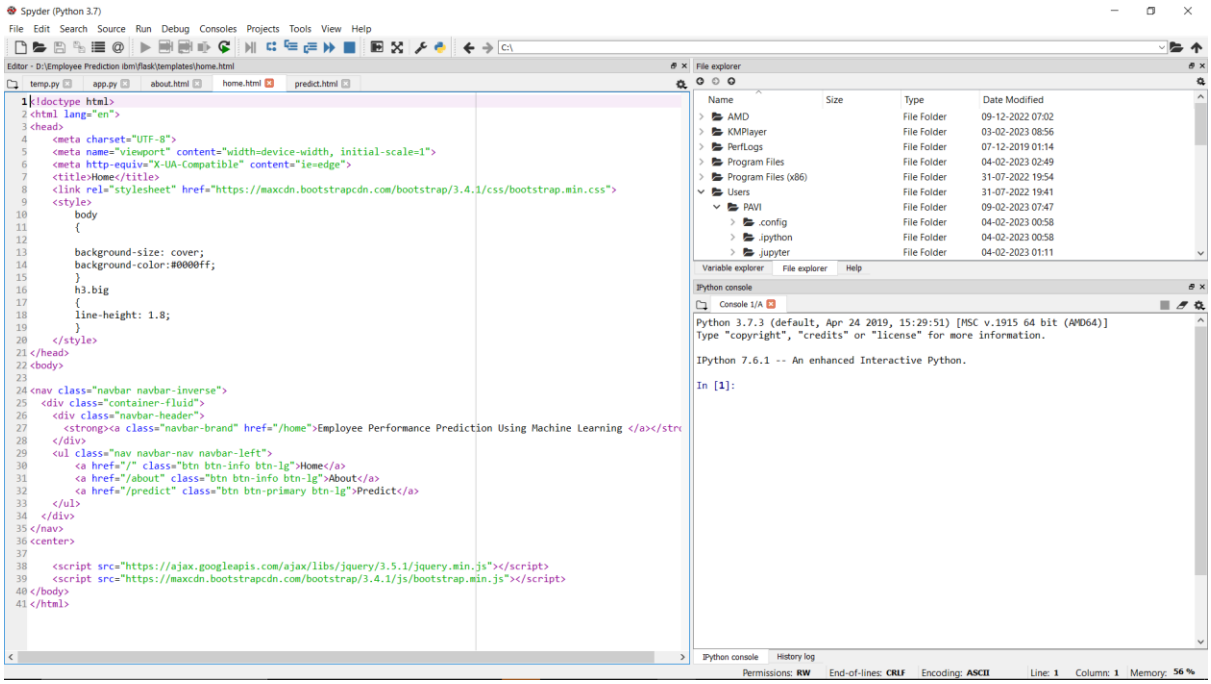
G. S. Thakur, A. Gupta, and S. Gupta, "Data Mining for Prediction of Human Performance Capability in the Software Industry," International Journal of Data Mining & Knowledge Management Process, vol. 5, no. 2, pp. 53--64, 2015.

APPENDIX

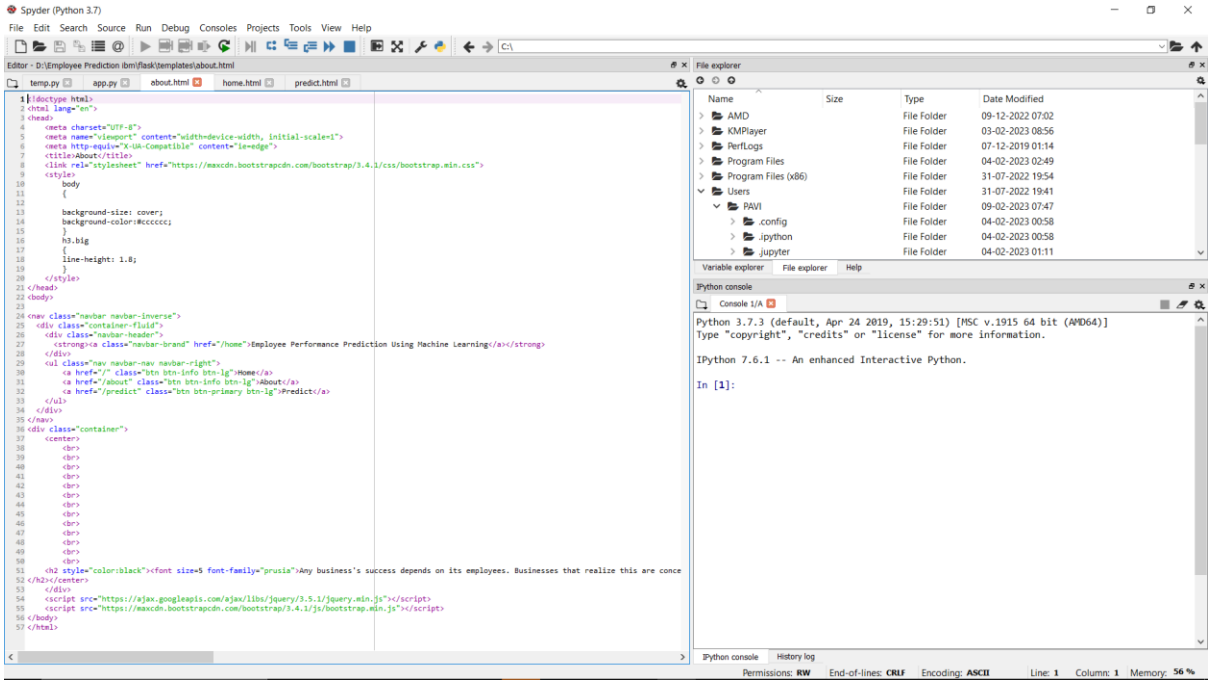
app.py



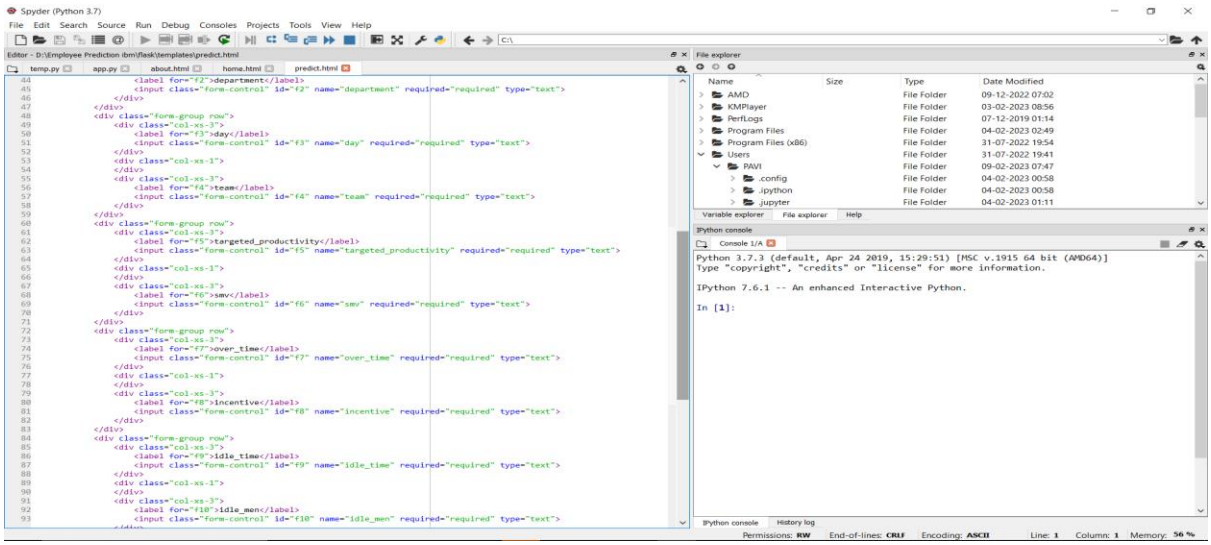
home.html

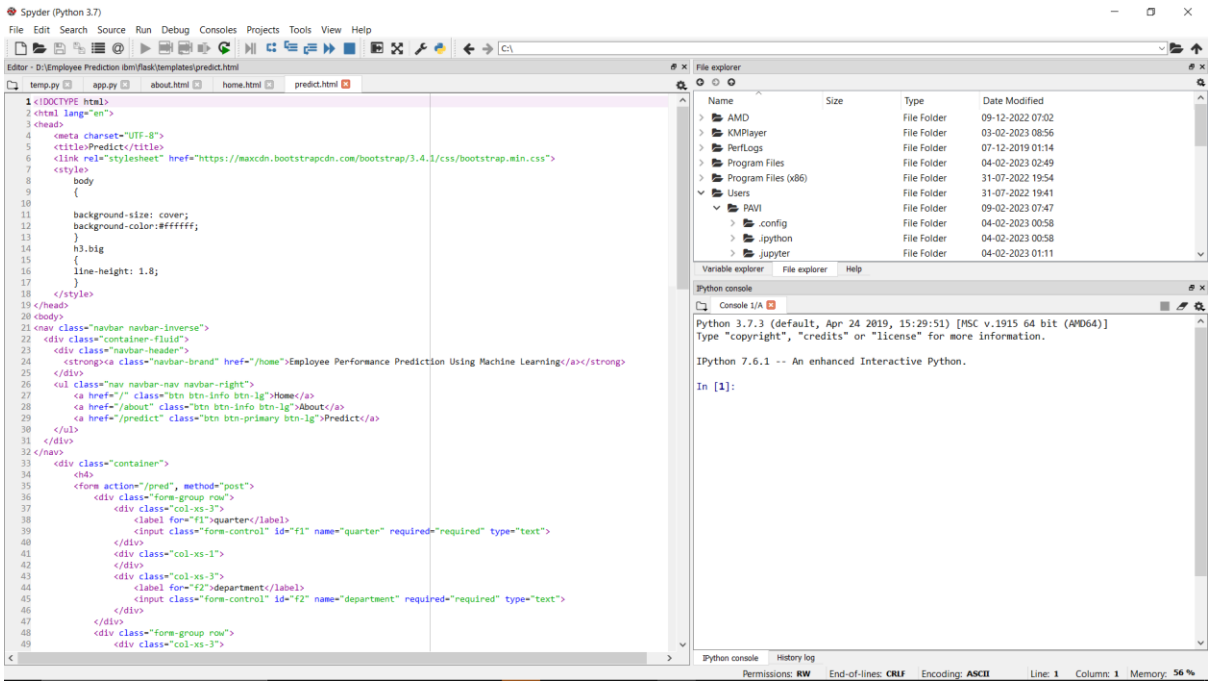


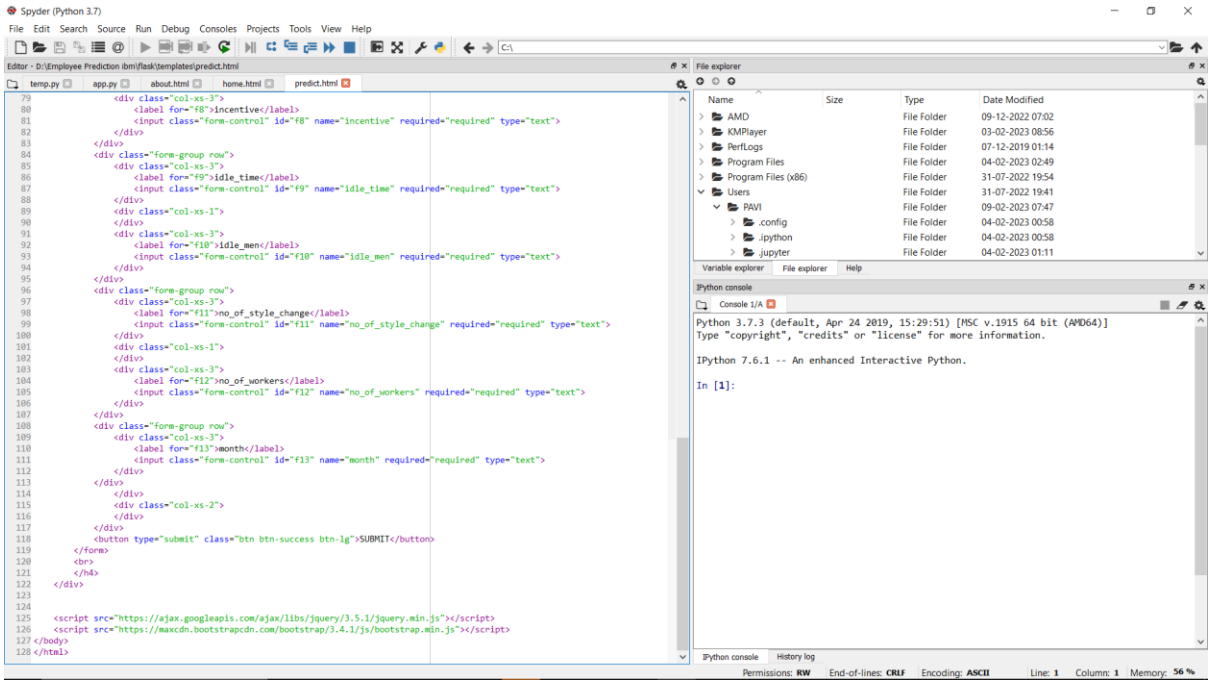
about.html



predict.html






Spyder (Python 3.7)
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KMPlayer File Folder 03-02-2023 08:56
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Program Files File Folder 04-02-2023 02:49
Program Files (x86) File Folder 31-07-2022 19:54
Users File Folder 31-07-2022 19:41
PAVI File Folder 09-02-2023 07:47
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.ipython File Folder 04-02-2023 00:58
.jupyter File Folder 04-02-2023 01:11
Variable explorer File explorer Help
IPython console
Console 1/A
Python 3.7.3 (default, Apr 24 2019, 15:29:51) [MSC v.1915 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.
IPython 7.6.1 -- An enhanced Interactive Python.
In [1]:
IPython console History log
Permissions: RW End-of-lines: CRLF Encoding: ASCII Line: 1 Column: 1 Memory: 56 %