Week 4: Deployment on Flask

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INTRODUCTION

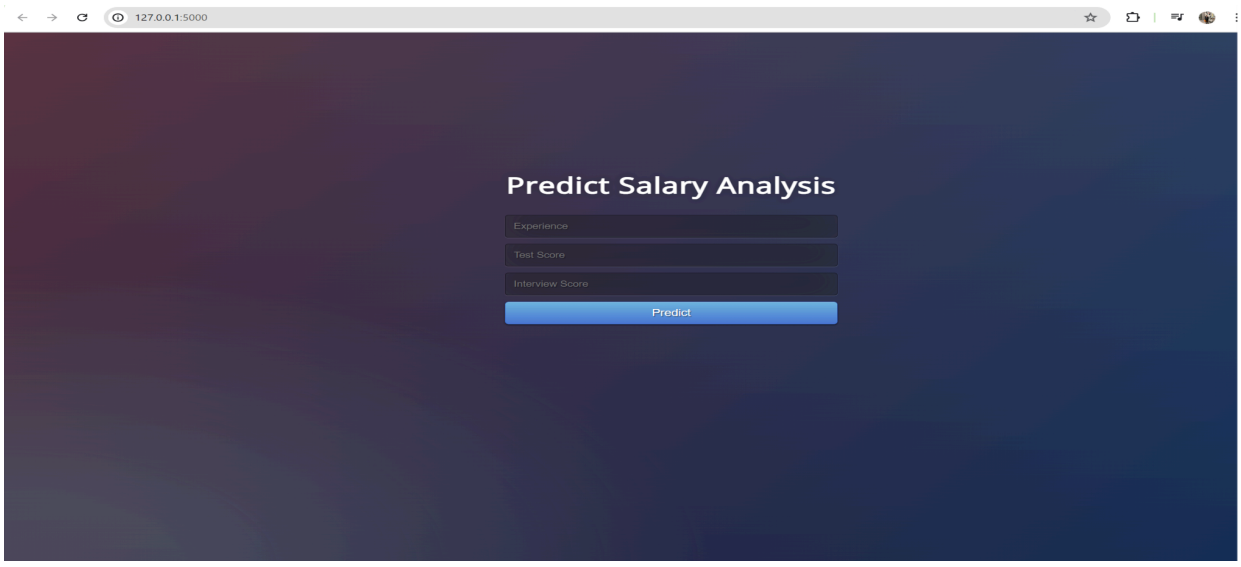
In this project, we are going to deploy a machine learning model using the Flask Framework. As a demonstration, our model helps to predict the salary of an employee based on certain features.

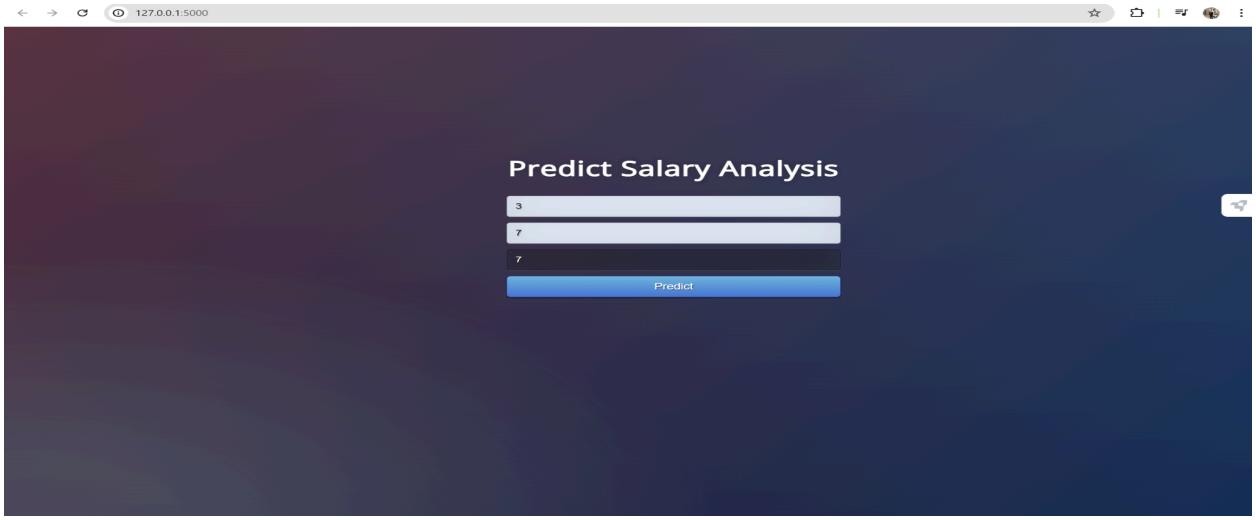
DATASET(hiring.csv)-

This dataset contains records of job candidates with columns for their experience, test score, interview score, and salary offered. Some values are missing or non-numeric , which may require cleaning for analysis. The dataset shows how different levels of experience, test, and interview scores correspond to various salary offers.

Model.py- First we are going to run the model.py file.The code file reads a dataset from a CSV file, processes it by filling missing values and converting textual experience data to integers. It then trains a Linear Regression model using the entire dataset and saves the trained model to the model.pkl file. Finally, it loads the saved model and makes a prediction for a given set of input values. This approach ensures the model is preserved for future use and demonstrates its ability to predict salary based on provided features.

App.py- After the model has been saved we run the app.py file.This code sets up the Flask web application with two main routes: one for rendering an HTML interface and another for making predictions through an API. The `home` route renders an HTML page (`index.html`), which likely contains a form for users to input data. The `predict` route processes the form data, makes a salary prediction using a previously trained Linear Regression model loaded from the model.pkl file, and returns the result to the HTML page. The `predict_api` route allows predictions via direct API calls, receiving data in JSON format, making predictions, and returning the result in JSON format. The application runs in debug mode, making it easier to test and develop.

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Predict Salary Analysis
3
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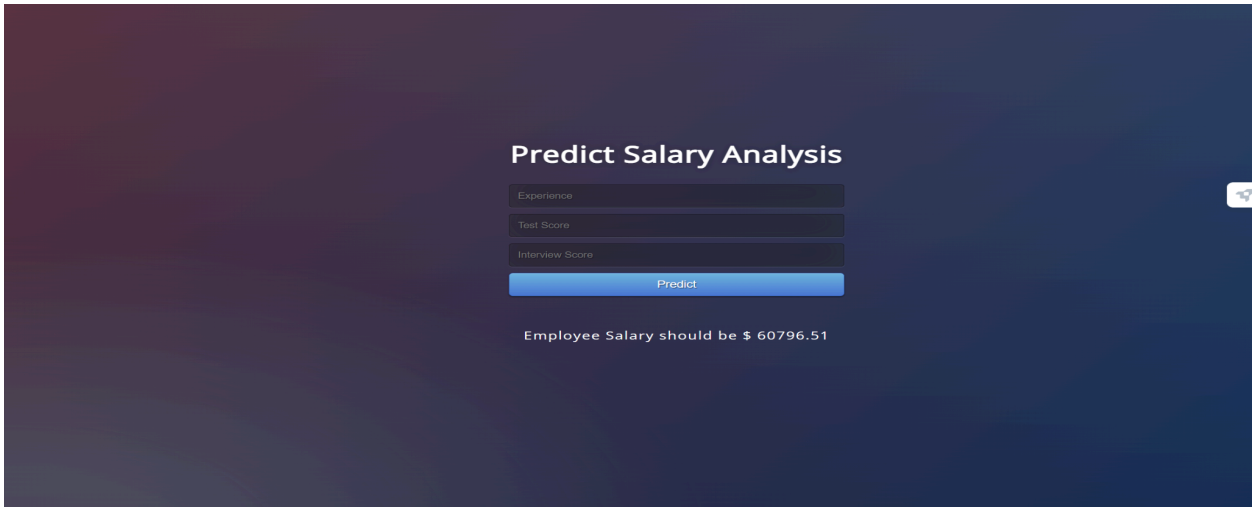
Predict


Predict Salary Analysis
Experience
Test Score
Interview Score
Predict
Employee Salary should be $ 60796.51