Internship Report

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Field: Artificial Intelligence & Machine Learning
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Organization/Platform: Developer Hub Corporation
Report Title: AI & ML Internship – Task Implementation Report

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Introduction

This report summarizes the key tasks completed during my AI & Machine Learning internship. The focus was on applying data preprocessing, visualization, model training, and evaluation techniques using Python, scikit-learn, and real-world datasets. The objective was to build predictive models and gain hands-on experience in the ML workflow.

Task 1: Simple Processes on Iris Dataset

Objective:
To perform basic analysis and visualization on the Iris dataset.

Tools Used:
Python, Pandas, Matplotlib, Seaborn

Key Steps:

- Loaded and explored the dataset.
- Plotted histograms and boxplots to analyze feature distributions.
- Used scatter plots to examine relationships between sepal and petal features.

Outcome:
Gained practical understanding of data exploration and visualization techniques on a labeled dataset.

Task 2: Work on Heart Disease Prediction

Objective:
To build a machine learning model to predict heart disease presence based on clinical data.

Tools Used:
Python, Pandas, scikit-learn

Key Steps:

- Preprocessed data: handled missing values and converted categorical features.
- Trained a logistic regression model.
- Evaluated using accuracy, confusion matrix, and ROC curve.

Outcome:
Successfully created a classification model with good performance. Improved skills in model evaluation and binary classification.

Task 3: Work on House Price Prediction

Objective:
To predict house prices using regression models based on property features.

Tools Used:
Python, scikit-learn, Matplotlib

Key Steps:

- Preprocessed data (e.g., encoding location, scaling numeric features).
- Trained Linear Regression and Gradient Boosting models.
- Evaluated using MAE and RMSE.
- Visualized predicted vs actual prices.

Outcome:
Built a working price prediction model. Learned how to apply both linear and ensemble models for regression problems.

Conclusion

These tasks provided essential experience in the machine learning lifecycle—from data handling to model building and evaluation. I improved my skills in Python, visualization, and predictive modeling. This internship served as a strong foundation for future work in data science and AI.
