

Internship Report

CODEXINTERN Technologies

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Internship Role: AI & ML Intern

Tasks Completed: Iris Classification & Spam Mail Detection

Introduction

This internship report summarizes the tasks and learnings during my role as a AI & ML Intern at CODEXINTERN Technologies. The main focus was on applying Machine Learning techniques to real-world datasets. I completed two key projects: Iris Flower Classification and Spam Mail Detection. These tasks improved my understanding of supervised learning, model training, and performance evaluation metrics.

Task 1: Iris Classification

The Iris dataset is a well-known dataset in Machine Learning used for multi-class classification. The goal is to predict the species of iris flowers based on features such as sepal length, sepal width, petal length, and petal width. Steps performed: 1. Loaded the dataset and split it into train/test sets. 2. Trained a Logistic Regression model. 3. Evaluated performance using accuracy score. Result: The model achieved high accuracy, showing that Logistic Regression is effective for this dataset.

Task 2: Spam Mail Detection

The Spam Mail Detection task focused on building a text classification model to differentiate between spam and ham (non-spam) emails. Steps performed: 1. Converted raw text into numerical features using CountVectorizer (Bag of Words approach). 2. Split the dataset into train/test sets. 3. Trained Naive Bayes and Logistic Regression models. 4. Evaluated performance using accuracy, precision and F1 score. Result: Both models performed well, with Logistic Regression achieving a strong precision.

Results and Skills Gained

Through these tasks, I gained hands-on experience in: - Data preprocessing and feature extraction. - Applying classification algorithms (Logistic Regression, Naive Bayes). - Evaluating models using key performance metrics. - Understanding practical applications of Machine Learning in text and structured data. This internship strengthened my skills in Python, scikit-learn, and Natural Language Processing basics.

Conclusion

The internship at CODEXINTERN Technologies provided me with valuable exposure to real-world machine learning tasks. I successfully implemented and evaluated models for classification problems, which enhanced both my theoretical knowledge and practical skills. This experience will be a strong foundation for my future career in Data Science and Machine Learning.