TEKNOSOFT

MACHINE LEARNING

ABOUT US

TeknoSoft is a vibrant community dedicated to fostering growth and empowerment among its members. With a focus on leadership development and collaborative initiatives, we provide platforms and resources for individuals to thrive and make a positive impact in their respective fields. Through mentorship programs, workshops, and collaborative projects, we empower our community to embrace leadership roles with confidence and drive meaningful change. Join us in our journey of empowerment, collaboration, and collective growth.

INSTRUCTIONS

Update your LinkedIn profiles to reflect your participation in the TeknoSoft internship program.

You can refer to online resources such as Google Search and read tutorials Watch videos(For Help).

Choose and complete tasks from one of three levels: Beginner, Intermediate, or Advanced, and upon successful completion, receive a certificate acknowledging your participation and task level achieved.

Maintain a separate GitHub repository named TEKNOSOFT for all tasks and share the link of the GitHub repo in the task submission form(it will be givenlater through email).

BENEFITS OF INTERNSHIP

CERTIFICATE OF ACHIEVEMENT

MENTORSHIP

EXPAND YOUR NETWORK

BEGINNER LEVEL TASK: HOUSE PRICE PREDICTION

- **Description:** Develop a simple linear regression model to predict house prices based on the size of the house in square feet.
- **Dataset Link:** House Prices Dataset
- **Instructions:**

1. Obtain the dataset containing information about house sizes and prices.
2. Preprocess the data by handling missing values and encoding categorical features if necessary.
3. Implement a linear regression algorithm using Python and libraries such as NumPy and scikit-learn.
4. Split the dataset into training and testing sets with an appropriate ratio.
5. Train the linear regression model on the training data.
6. Evaluate the performance of the model using metrics such as Mean Squared Error (MSE) on the testing data.
7. Visualize the regression line along with the actual data points using matplotlib or seaborn.

INTERMEDIATE LEVEL TASK: SPAM EMAIL CLASSIFICATION

- **Description:** Build a classification model to predict whether an email is spam or not based on its content.
- **Dataset Link:** Spam Email Dataset
- **Instructions:**

1. Obtain the labeled dataset containing emails classified as spam or not spam.
2. Preprocess the text data by tokenizing, removing stop words, and performing stemming or lemmatization.
3. Implement a text classification algorithm such as Naive Bayes or Support Vector Machines (SVM) using libraries like NLTK or scikit-learn.
4. Split the dataset into training and testing sets with an appropriate ratio.
5. Train the classification model on the training data.
6. Evaluate the performance of the model using metrics such as accuracy, precision, recall, and F1-score on the testing data.

ADVANCED LEVEL TASK: HANDWRITTEN DIGIT RECOGNITION

- **Description:** Develop a convolutional neural network (CNN) to classify images of handwritten digits from the MNIST dataset.
- **Dataset Link:** MNIST Dataset
- **Instructions:**

1. Obtain the MNIST dataset containing grayscale images of handwritten digits (0-9).
2. Preprocess the images by normalizing pixel values and reshaping them into the appropriate format.
3. Implement a CNN architecture using deep learning frameworks like TensorFlow or PyTorch.
4. Split the dataset into training and testing sets with an appropriate ratio.
5. Train the CNN model on the training data.
6. Evaluate the performance of the model using metrics such as accuracy and confusion matrix on the testing data.

ASK US FOR HELP!

Feel free to reach out to us if you need any assistance or guidance during your internship journey. Our aim is to foster a learning environment where you can grow and develop your skills at your own pace. Whether the tasks seem easy or challenging, we encourage you to approach them with professionalism and dedication. Your commitment to the tasks will contribute to your personal and professional growth, and we're here to support you every step of the way.

GET SOCIAL WITH US

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