Machine Learning Tasks & Instructions — CodeAlpha

🖥️ Machine Learning — Internship Overview

This internship program provides hands-on experience in machine learning algorithms and model development. CodeAlpha is a leading software development company driving innovation through AI and intelligent systems. The internship empowers students to work with Python, Scikit-learn, TensorFlow, and other ML libraries to build and train models for real-world applications. Interns will learn data preprocessing, supervised and unsupervised learning, model evaluation and optimization techniques. With expert mentorship and live projects, interns will gain practical knowledge in deploying machine learning solutions to solve complex problems.

🎁 Internship Perks

- Internship Offer Letter
- Completion Certificate (QR Verified)
- Unique ID Certificate
- Letter of Recommendation (based on performance)
- Job Opportunities / Placement Support
- Resume Building Support

📌 Instructions for Interns

1. Share your internship status on **LinkedIn**, tagging **@CodeAlpha**.
2. Complete the **assigned projects** within the mentioned time frame.
3. Upload your complete source code to **GitHub** in a repository named:
   `CodeAlpha_ProjectName`
4. Post a **video explanation** of your project on LinkedIn with GitHub repo link.
5. Submit your completed task using the **Submission Form**.
6. **Complete any 1 out of the 2 tasks** listed below (from your domain).

📱 Machine Learning Task List

(Complete any 1 of the following tasks)

✅ TASK 1: Credit Scoring Model

Objective: Predict an individual's **creditworthiness** using past financial data.
Approach: Use **classification algorithms** like Logistic Regression, Decision Trees, or Random Forest.
Key Features:

- Feature engineering from financial history.
- Model accuracy assessment using metrics like **Precision, Recall, F1-Score, ROC-AUC**.
- Dataset could include: income, debts, payment history, etc.

✅ TASK 2: Emotion Recognition from Speech

Objective: Recognize **human emotions** (e.g., happy, angry, sad) from speech audio.
Approach: Apply **deep learning** and **speech signal processing** techniques.
Key Features:

- Extract features like **MFCCs (Mel-Frequency Cepstral Coefficients)**.
- Use models like **CNN**, **RNN**, or **LSTM**.
- Datasets: RAVDESS, TESS, or EMO-DB.

🚨 Important Note

To be eligible for the internship certificate, participants must complete the **first task**.
📌 **Submission of the *first task* is compulsory.** If the first task is not submitted, certificate generation may not be possible.

Please complete and submit your first task carefully using the official submission form.

📤 Submission Details

A submission form will be shared in your respective **WhatsApp group**. You are required to submit your completed task only through that form. Please follow the instructions mentioned in the form carefully to ensure your submission is accepted.

📞 Contact Information

- Website: www.codealpha.tech
- WhatsApp: +91 8052293611
- Email: services@codealpha.tech