

# Data Science Tasks & Instructions — CodeAlpha

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## Data Science — Internship Overview

This internship program offers practical experience in data science, machine learning, and statistical modeling. CodeAlpha is a leading software development company specializing in data-driven innovation and AI solutions. The internship empowers students to work with tools like Python, R and libraries such as Pandas, Scikit-learn, and TensorFlow. Interns will learn data preprocessing, exploratory data analysis, building predictive models and deploying machine learning solutions. With expert mentorship and hands-on projects, interns will gain the skills needed to solve real-world problems using data science techniques.

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## 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
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## 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).
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## Data Science Task List

(Complete any 1 of the following tasks)

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### TASK 1: Iris Flower Classification

- Use measurements of **Iris flowers** (setosa, versicolor, virginica) as input data.
  - Train a **machine learning model** to classify the species based on these measurements.
  - Use libraries like **Scikit-learn** for easy dataset access and model building.
  - Evaluate the model's **accuracy and performance** using test data.
  - Understand **basic classification concepts** in machine learning.
  - DOWNLOAD DATASET FROM [here](#)
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## ✓ TASK 2: Unemployment Analysis with Python

- Analyze **unemployment rate data** representing unemployed people percentage.
  - Use Python for **data cleaning, exploration, and visualization** of unemployment trends.
  - Investigate the impact of **Covid-19 on unemployment rates**.
  - Identify key patterns or **seasonal trends** in the data.
  - Present insights that could inform **economic or social policies**.
  - DOWNLOAD DATASET FROM [here](#)
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### 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.

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### 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.

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### Contact Information

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