

Cloud Computing Tasks & Instructions — CodeAlpha

Cloud Computing — Internship Overview

This internship program provides practical experience in cloud technologies and infrastructure management. CodeAlpha is a leading software development company focused on scalable, secure and efficient cloud solutions. The internship enables students to work with popular cloud platforms like AWS, Azure or Google Cloud, learn to deploy and manage cloud resources, and build cloud-native applications. Interns will receive hands-on training in virtualization, containerization, serverless computing and cloud security with expert guidance and opportunities to contribute to live cloud projects in a collaborative team environment.

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 3 or 2 out of the 4 tasks** listed below (from your domain).
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Cloud Computing Task List

(Complete any 2 or 3 of the following tasks)

TASK 1: Data Redundancy Removal System

- **Design a system** that identifies and classifies data as **redundant** or **false positive**.
 - **Implement a validation mechanism** to check new data against existing data.
 - **Prevent duplicate data** from being added into the cloud database.
 - **Append only unique and verified** data entries to the database.
 - Ensure **database accuracy and efficiency** by removing or avoiding redundancy
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✓ TASK 2: Detecting Data Leaks Using SQL Injection

- **Build a cloud system** that secures user data against **SQL injection attacks**.
 - Use **AES-256 encryption** to securely store user credentials and sensitive info.
 - Implement a **capability code mechanism** to inject SQL securely and control server access.
 - Provide a **double-layer security protocol** to prevent data leaks via SQL injection.
 - Make the system **accessible over the internet** without heavy system requirements.
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✓ TASK 3: Cloud-Based Bus Pass System

- **Develop an online ticket booking system** hosted on the cloud.
 - Ensure prevention of **ticket loss, theft and incorrect pricing**.
 - Design the system to handle **high traffic** by dynamically provisioning servers.
 - Focus on **scalability and reliability** improvements over traditional booking sites.
 - **Test and deploy** the system to provide seamless booking experience for users.
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✓ TASK 4: Making a Chatbot

- **Design an AI-powered chatbot** using either **retrieval-based or generative models**.
 - Enable **instant responses** to user queries on websites.
 - Train the chatbot with **predefined input patterns** for commercial use.
 - **Integrate the chatbot** seamlessly with the target website interface.
 - **Optimize and test** the chatbot for accuracy and user engagement.
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Important Note

Internship Completion Criteria:

To be eligible for the internship certificate, participants must complete a minimum of **two or three tasks**. Submitting only one task will be considered **incomplete** and certificates will **not** be issued in such cases.



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

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