

TASK SHEET

Software Development

DESCRIPTION

Let us consider a case where the user sends a text or file from his phone to his friend. The risk of the data being accessed by a third party is high when the data enters the cloud platform. Hence a new method to secure the messages/file is to be done either by building a new algorithm or by modifying the existing one which can give more security and consume less time. The identity of the user must also be verified by using the authentication, verification and validation methodologies.

Tasks:

1. Try to build or change an existing algorithm to secure message send by the user based on efficiency.
2. Confirm the identity of the user by entity authentication using verification and validation.

Contestants should use python and ML to perform this Task.

IOT Projects:

DESCRIPTION

Morse code has been employed as an assistive technology, helping people with a variety of disabilities to communicate. Morse can be sent by persons with severe motion disabilities, as long as they have some minimal motor control. An original solution to the problem that caretakers have to learn to decode has been an electronic typewriter with the codes written on the keys.

Morse code can also be translated by computer and used in a speaking communication aid. An important advantage of Morse code over row column scanning is that once learned, it does not require looking at a display. Also, it appears faster than scanning.

Task:

Encryption and Decryption between users in Morse using a Flashlight.

Steps:

1. Write a code to encrypt text to Morse.
2. Create a link (program or interface (no external components)) between Morse and a flashlight and that should blink with respect to Morse.
3. Create another program to record the flash and that flash-toggling should be again reconverted into Morse and then decrypted into text.

Contestants can use python (or) Java languages to perform this Task.

Full-Stack Developer

DESCRIPTION

The Distributed Denial of Service (DDoS) attack is an attack poses a server threat to the internet. It is difficult to find the exact sign of attacking. Moreover, it occurs when a huge number of users occasionally access the target at the same time. Using the entropy computing you should find the accuracy of an attack.

TASK

Write a program using entropy computing to detect DDOS attack.

Steps:

1. Create a algorithm for sending data packets to the server.
2. Find Accuracy.

Data Science:

DESCRIPTION

Diabetes is a type of chronic disease which is more common among the people of all age groups. Predicting this disease at an early stage can help a person to take the necessary precautions and change his/her lifestyle accordingly to either prevent the occurrence of this disease or control the disease (For people who already have the disease).

Task:

1. Prepare the data-set using several methods to train the model.
2. Build a model which can give high accuracy of predicting the disease.

Digital Marketing

1. Create your own strategy to promote a company around India.

Examples: Companies like transportation/any start-ups/college/training institute/product-oriented promotion

Content Writer

Task:

Create a content strategy for a client/product

- Keyword density.
- Meta Tags
- Body Tags
- Alt Tags
- URL Structure
- Internal/External linking

Web Development

Task:

Create a Multi-Page Responsive Website.

Designing

Task:

Design a Creative Logo showcasing ML and Data Science and it Should be simple and clear and innovative.