Python
PROGRAMMING

Task Card

Basic Web Scraper

Objective:
- Develop a web scraper to extract information from a website.

Details:
- Write a script to scrape data (e.g., headlines, product prices) from a specified website using libraries like BeautifulSoup or Scrapy.
- Implement functionality to handle different HTML structures and extract relevant data.
- Store the scraped data in a CSV file or database.

Simple Chatbot

Objective:
- Build a basic rule-based chatbot

Details:
- Create a command-line or GUI-based chatbot that responds to predefined keywords or phrases.
- Implement functionality for handling different types of user inputs and generating appropriate responses.
- Optionally, use a library like ChatterBot for more advanced features.

Linear Regression Model

Objective:

- Implement a simple linear regression model

Details:

- Use a dataset (e.g., house prices, student scores) to predict a continuous variable.
- Implement the linear regression algorithm using Python libraries such as NumPy and scikit-learn.
- Visualize the data and the regression line using Matplotlib.

Spam Email Classifier

Objective:

- Create a spam email classifier using Natural Language Processing (NLP).

Details:

- Use a dataset of labeled emails (spam or not spam).
- Preprocess the text data (e.g., tokenization, removing stop words) using NLTK.
- Implement a Naive Bayes classifier using scikit-learn to classify the emails.