

# Data Structures and Algorithms Chatbot Documentation

## 1. Introduction

This document provides details about the Data Structures and Algorithms (DSA) Chatbot, including its functionality, requirements, and usage.

## 2. Requirements

The following Python libraries are required to run the DSA Chatbot:

- nltk
- transformers
- fpdf (for documentation)

Additionally, Google Colab is recommended for executing the script.

## 3. Installation

Install the required libraries using pip:

```
!pip install nltk
```

```
!pip install transformers
```

## 4. Usage

To start the chatbot, run the script in Google Colab. The chatbot can handle queries related to data structures and algorithms using a combination of rule-based responses and a pre-trained transformer model from Hugging Face. Type your queries in the provided input and the chatbot will

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respond accordingly.

### **5. Interactive Chat**

To chat with the chatbot, simply run the provided script and type your questions. The chatbot will respond based on predefined rules and the transformer model.

### **6. Exiting the Chatbot**

To exit the chatbot, type "exit" or "quit". The chatbot will thank you and terminate the session.