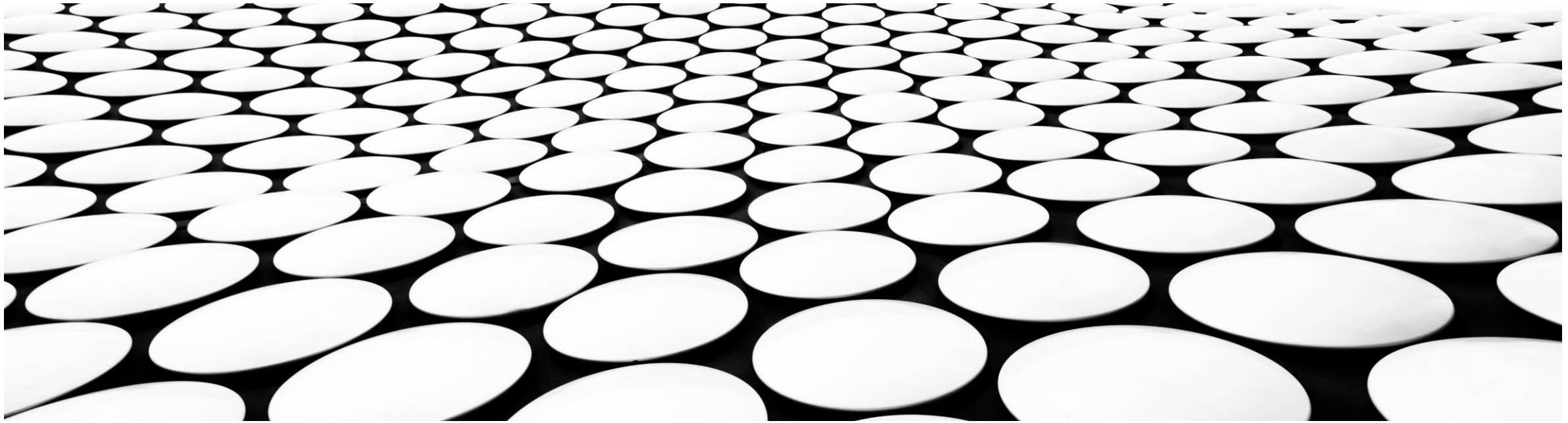
GUVI CHATBOT

GPT – 2 FINE TUNED MODEL DEPLOYMENT ON THE HUGGING FACE SPACES



INTRODUCTION

PROBLEM STATEMENT :

The task is to deploy a fine-tuned GPT model, trained specifically on GUVI's company data, using Hugging Face services. Students are required to create a scalable and secure web application using Streamlit or Gradio, making the model accessible to users over the internet. The deployment should leverage Hugging Face spaces resources and any database to store the username and login time.

OBJECTIVES :

To deploy a pre-trained or Fine tuned GPT model using HUGGING FACE SPACES, making it accessible through a web application built with Streamlit or Gradio.

BUSINESS USE CASES

CUSTOMER SUPPORT AUTOMATION :

Integrate the model with GUVI’s customer support system to automate responses to frequently asked questions.

CONTENT GENERATION FOR MARKETING:

Generate marketing content like blog posts, social media updates, and email newsletters tailored to GUVI’s audience.

EDUCATIONAL ASSISTANCE FOR STUDENTS :

Implement the model as a virtual teaching assistant within GUVI’s educational platform.

INTERNAL KNOWLEDGE BASE :

Develop a tool for GUVI employees to access company-related information and resources quickly.

METHODOLOGY

DATA COLLECTION :

Data specific to GUVI, including course descriptions, FAQs, and user interactions, was collected for training the model.

DATA PREPROCESSING :

The collected data was cleaned and tokenized to be compatible with the GPT-2 model. Special tokens and padding were added where necessary.

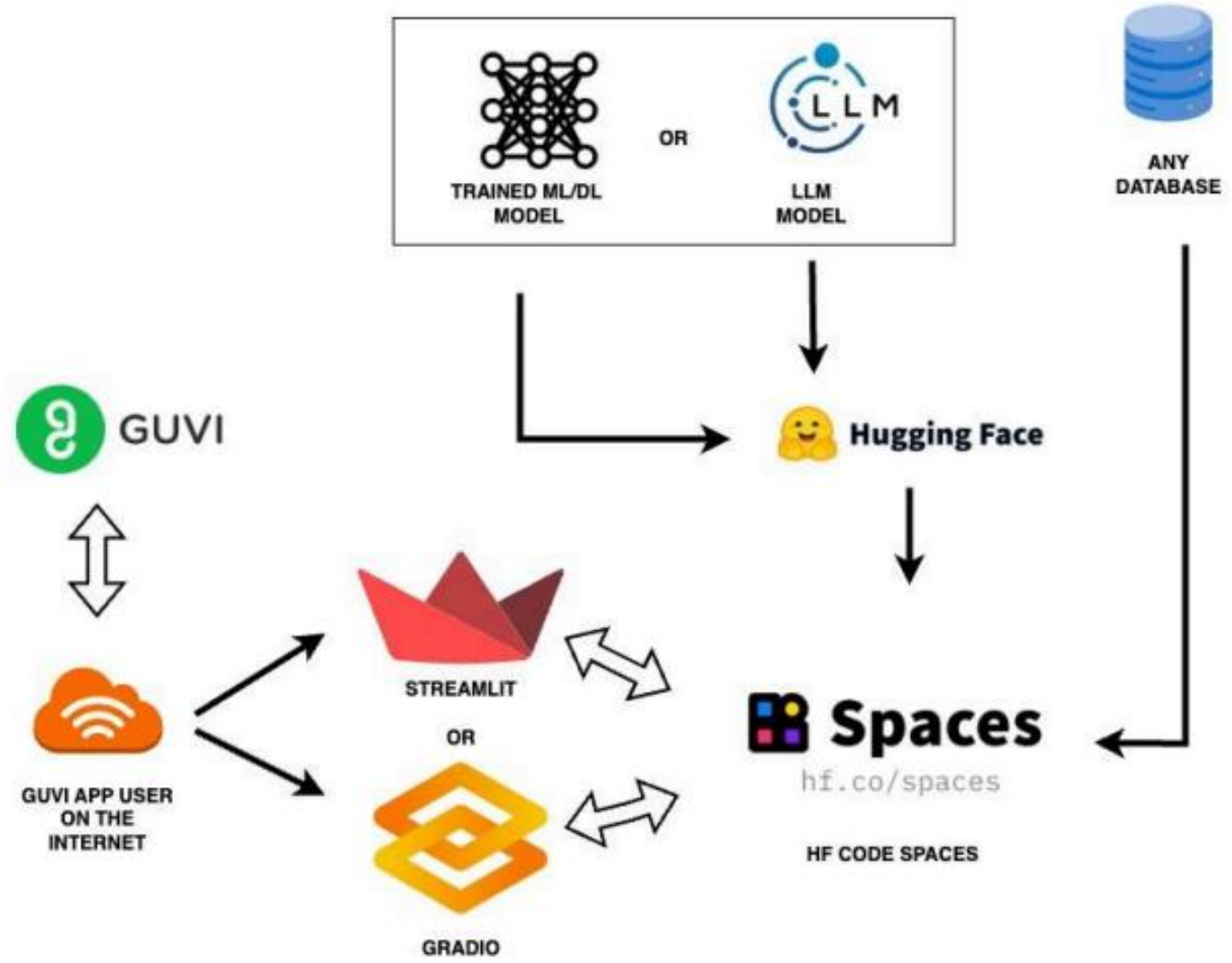
MODEL FINE-TUNING :

The GPT-2 model was fine-tuned using the preprocessed data on a high performance computing environment. The training parameters were adjusted to optimize model performance.

DEPLOYMENT :

The fine-tuned model was deployed on Hugging Face Spaces, providing an accessible interface for interaction via a web-based application.

APPROACH:

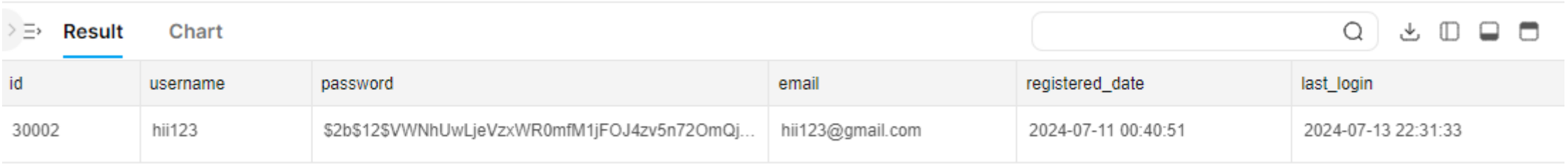

TRAINED ML/DL MODEL
OR
LLM
LLM MODEL
ANY DATABASE
GUVI
Hugging Face
STREAMLIT
OR
GRADIO
GUVI APP USER ON THE INTERNET
Spaces
hf.co/spaces
HF CODE SPACES

RESULTS

USER AUTHENTICATION :

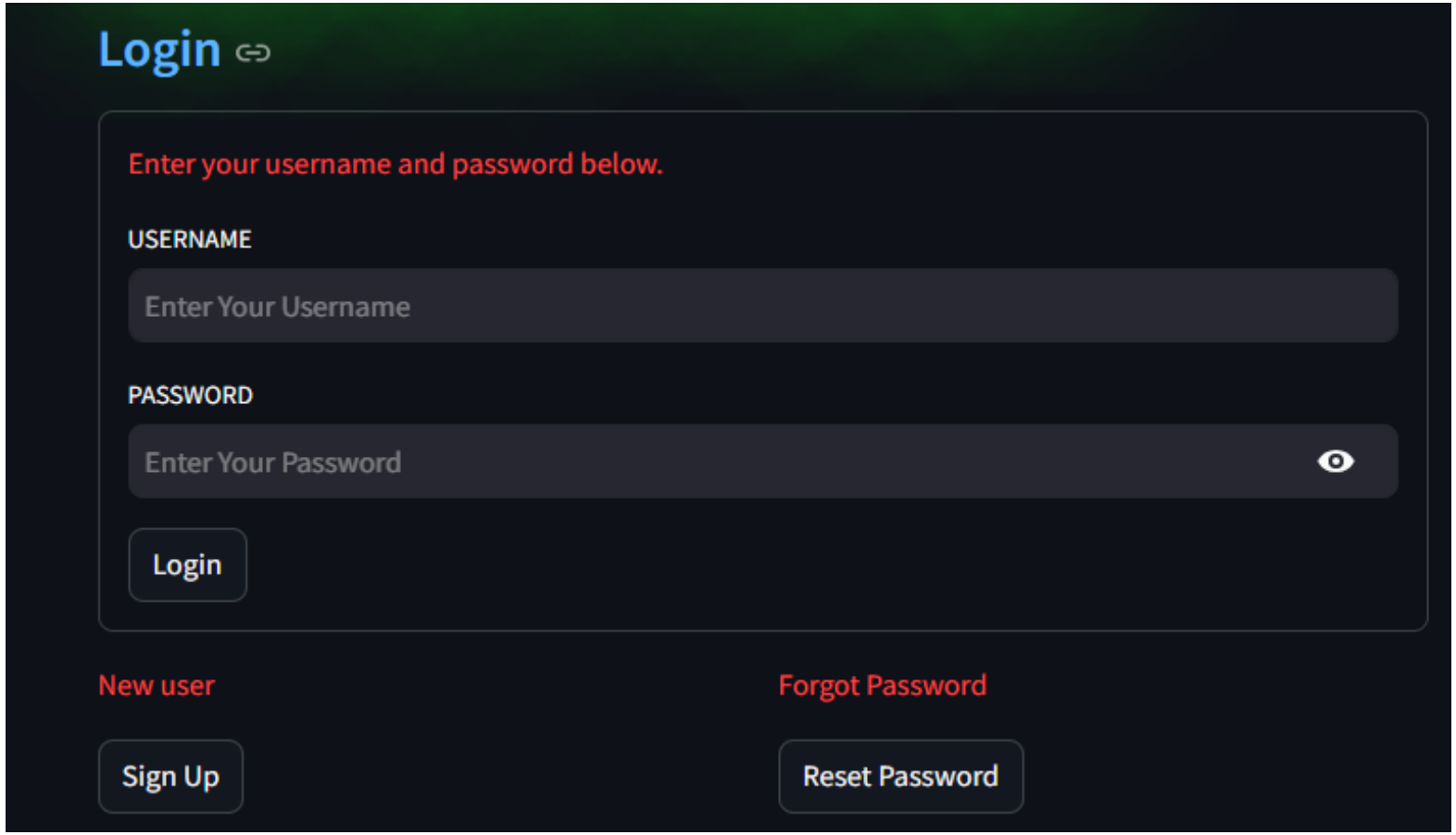
The authentication system employs bcrypt for secure password hashing and integrates functionalities for user signup, login, and password reset. User passwords are securely hashed before storage in TiDB, ensuring data privacy and security. The system facilitates seamless user interaction through streamlined login processes and robust password management features, enhancing both security and user experience.

TIDB -CLOUD DATABASE :

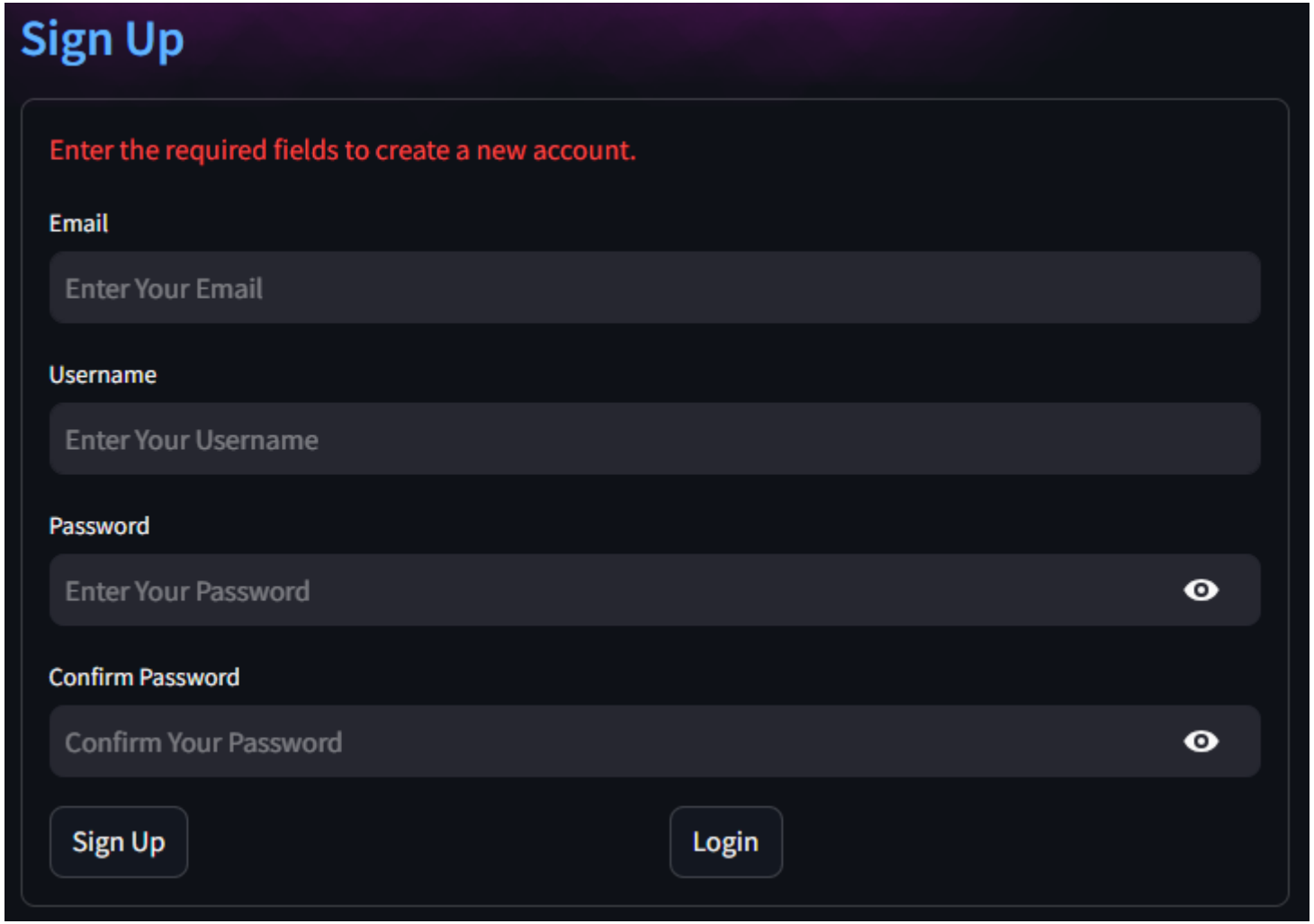


id	username	password	email	registered_date	last_login
30002	hii123	$2b$12$VWNhUwLjeVzxWR0mfM1jFOJ4zv5n72OmQj...	hii123@gmail.com	2024-07-11 00:40:51	2024-07-13 22:31:33

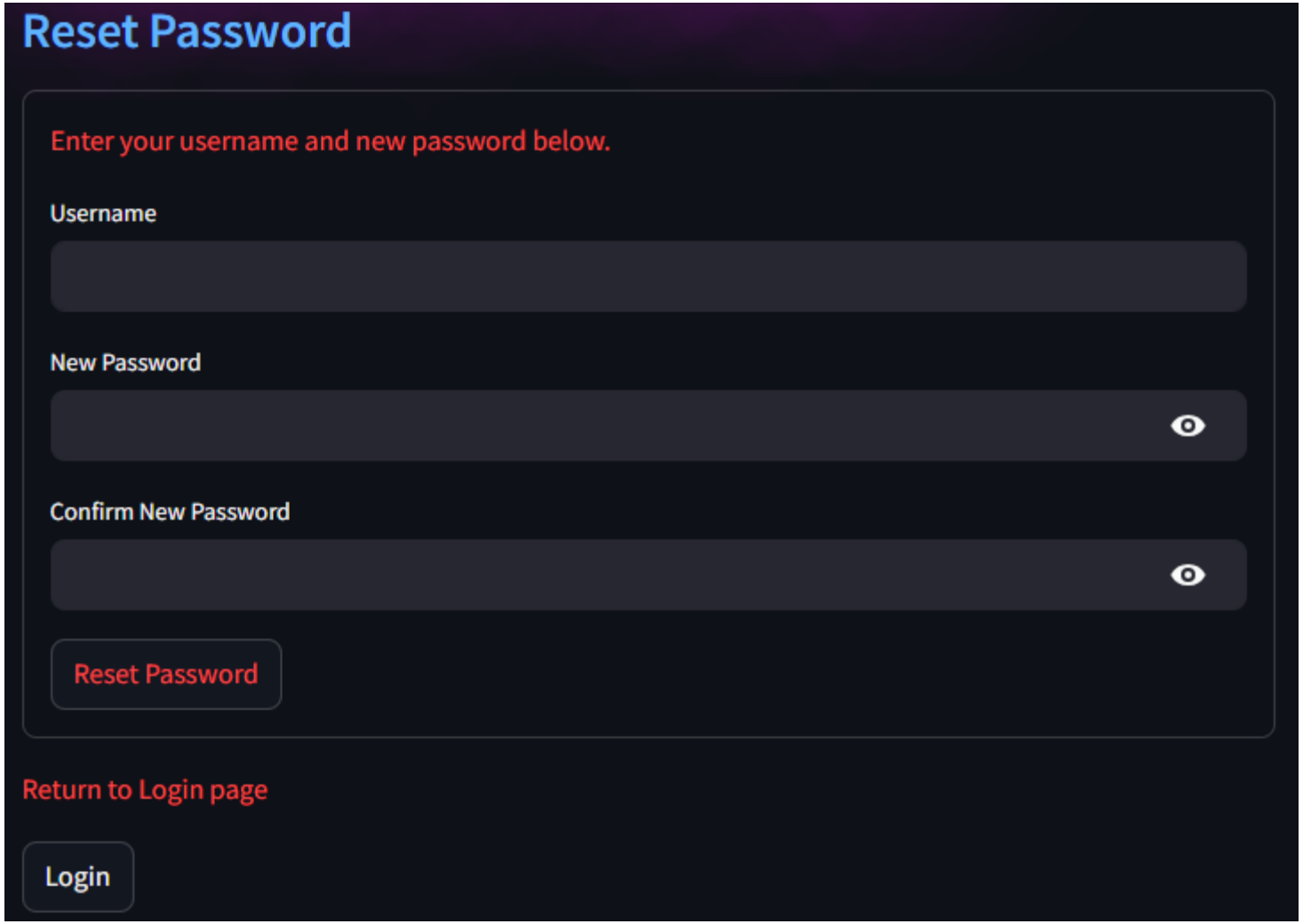
LOGIN PAGE


Login
Enter your username and password below.
USERNAME
Enter Your Username
PASSWORD
Enter Your Password
Login
New user
Forgot Password
Sign Up
Reset Password

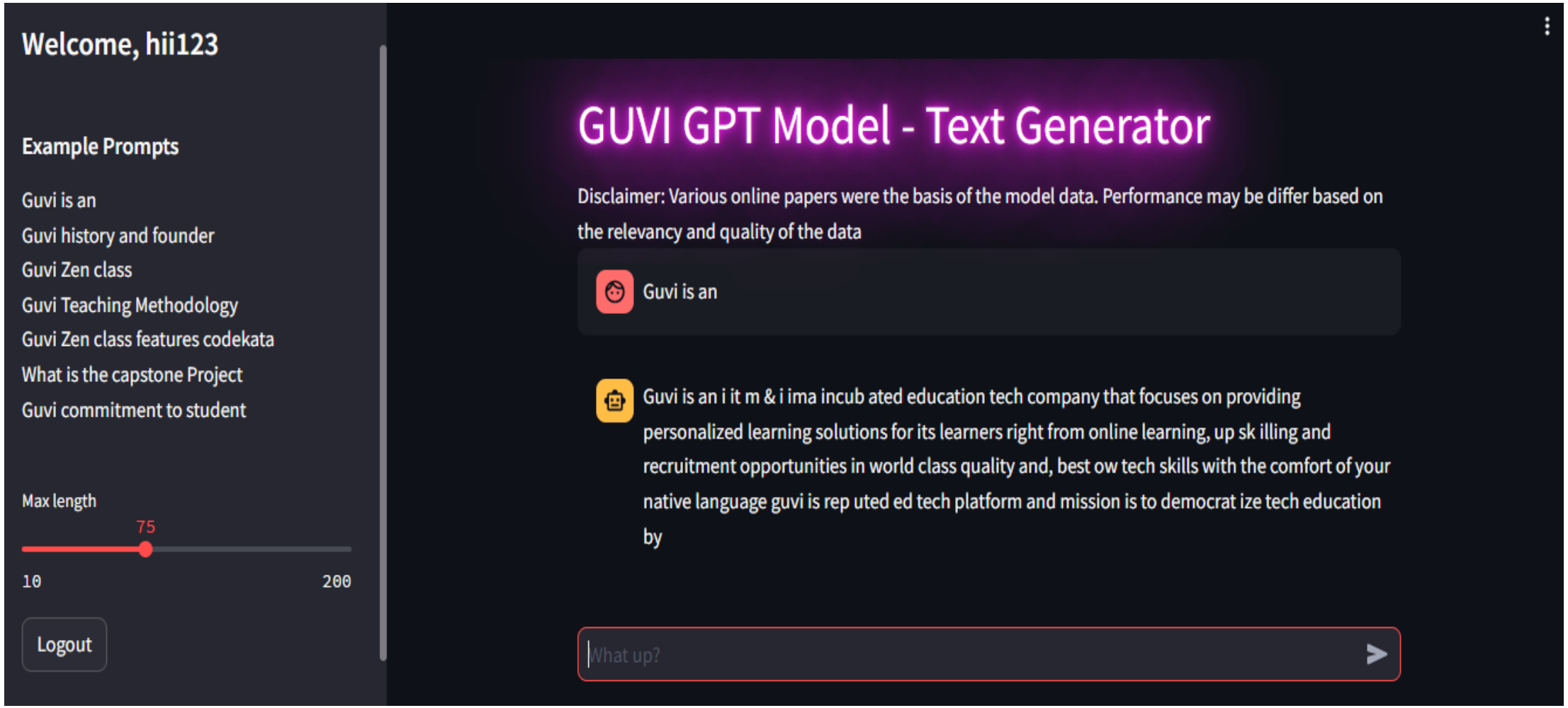
SIGN UP PAGE


Sign Up
Enter the required fields to create a new account.
Email
Enter Your Email
Username
Enter Your Username
Password
Enter Your Password
Confirm Password
Confirm Your Password
Sign Up
Login

RESET PASSWORD PAGE



STREAMLIT INTERFACE



CONCLUSION :

To conclusion, the implementation of the optimized GPT model with the use of Streamlit and Hugging Face Spaces signifies a noteworthy progression in the field of AI applications. The integration of cutting-edge natural language processing skills into a scalable web application environment is demonstrated by this project.

The implementation of data security measures, such as password encryption for user privacy, guaranteeing strong performance, and designing an intuitive user interface are among the major accomplishments.

In order to ensure continuous innovation in AI-driven products, future improvements will concentrate on optimizing model responsiveness and efficiency based on user feedback.