Chatbot for Multi-Format Documents

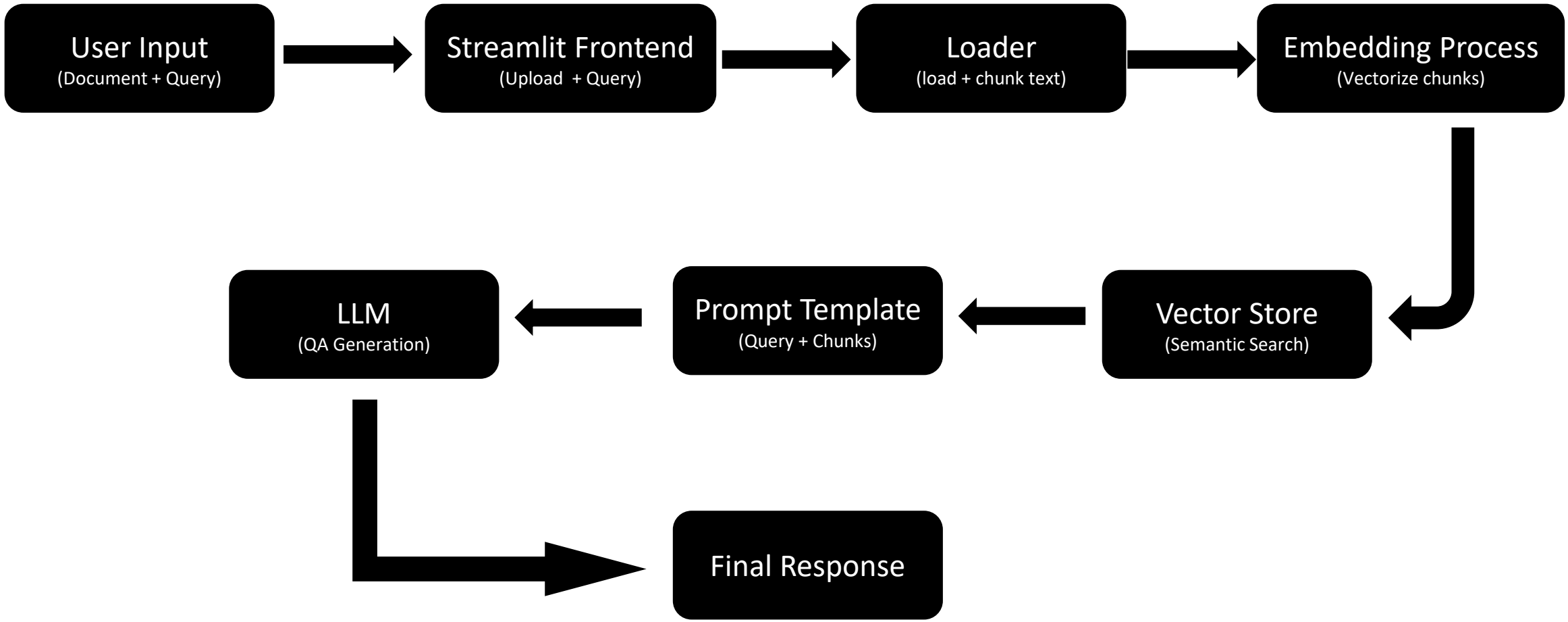
Architecture & Flow

A streamlined PDF chatbot using LangChain with HuggingFace embeddings, built for answering user queries from uploaded documents.

Architecture

Component	Role
Loader	LangChain loader to extract and chunk PDF content
Embedding Process	Applies HuggingFace embeddings to convert chunks into vectors
Vector Store	FAISS (Facebook AI Similarity Search) to store and retrieve relevant chunks by query
Prompt Template	Combines query and retrieved chunks to guide the LLM
LLM	DeepSeek Model Responds using OpenRouter API with context-aware answers
Streamlit UI	For Frontend that sets for user interaction having page config, title, and description.

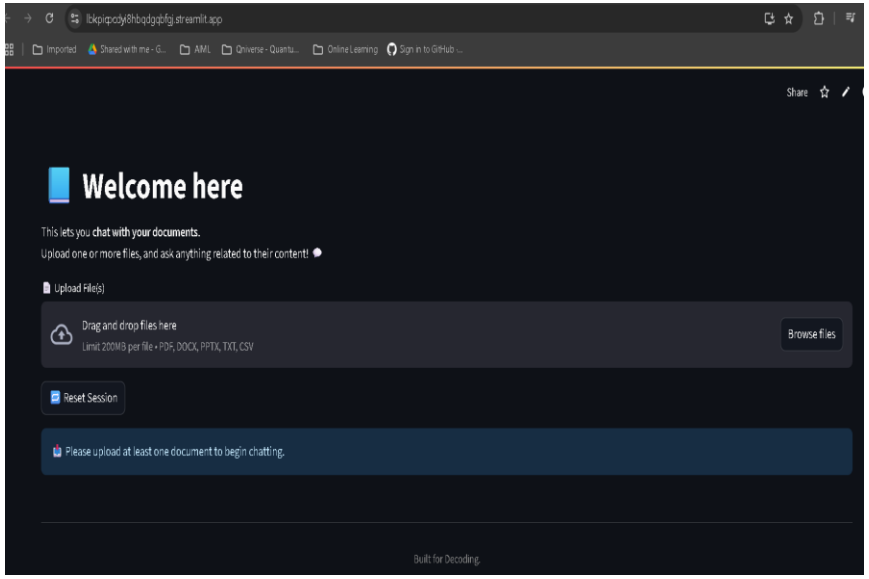
Flow


User Input
(Document + Query)
Streamlit Frontend
(Upload + Query)
Loader
(load + chunk text)
Embedding Process
(Vectorize chunks)
Vector Store
(Semantic Search)
Prompt Template
(Query + Chunks)
LLM
(QA Generation)
Final Response

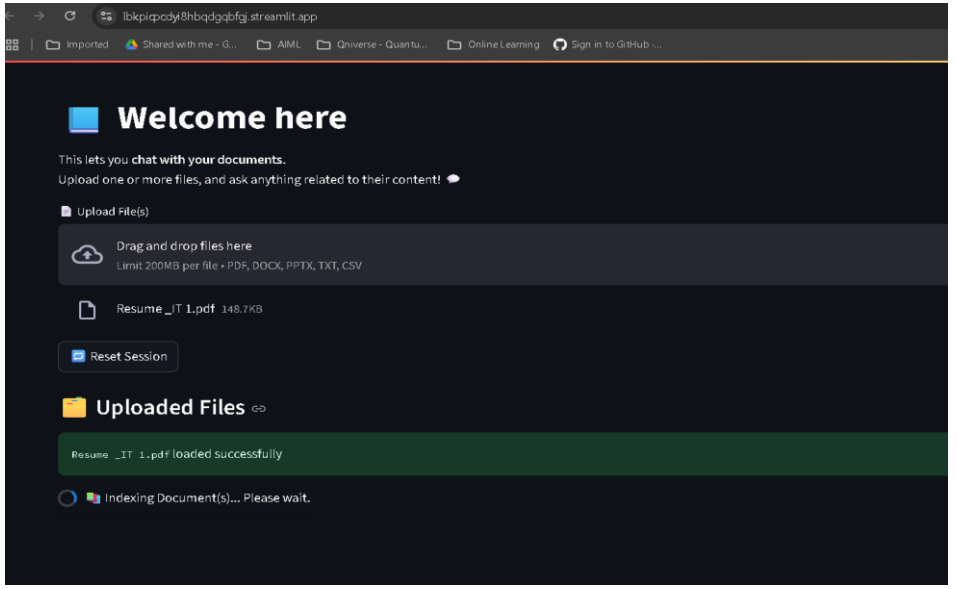
Screenshots

PDF

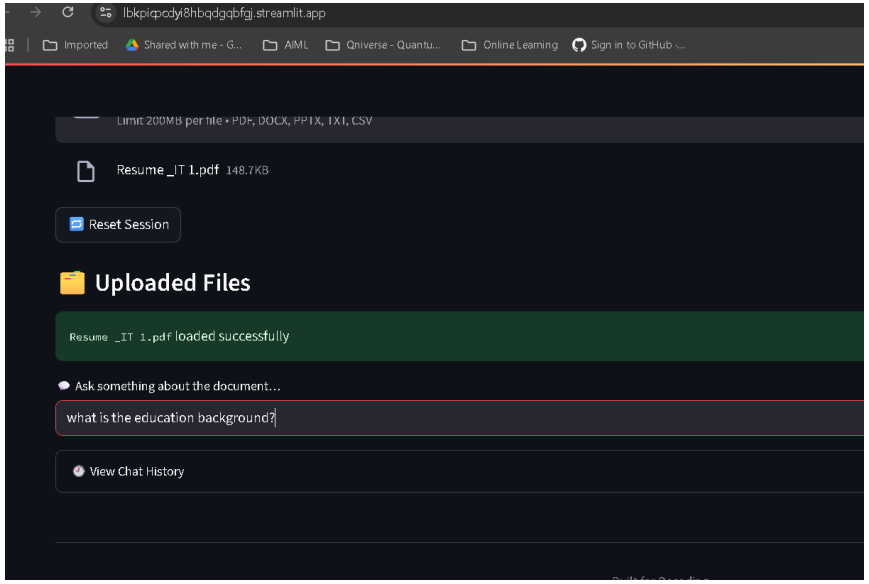
Home Page



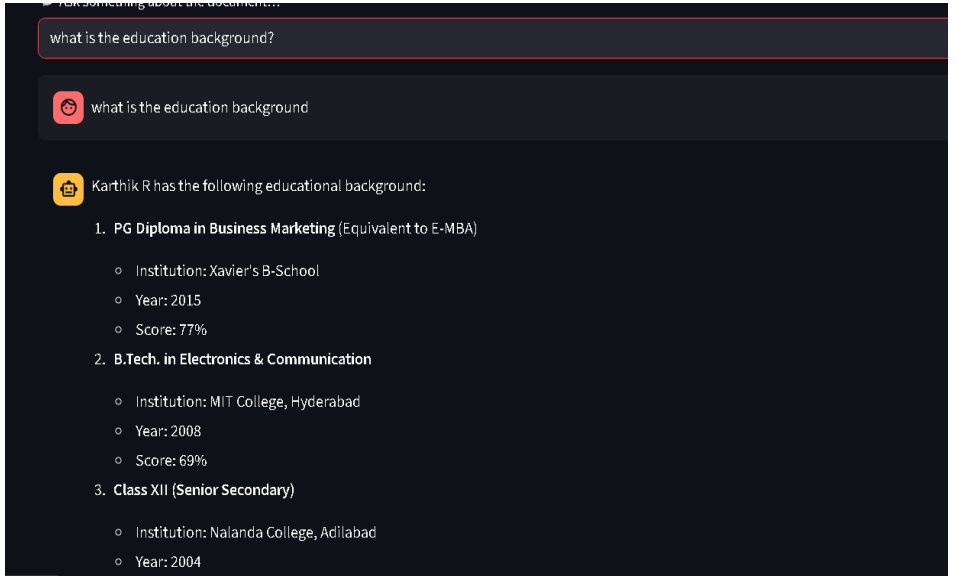
User Input



User Query



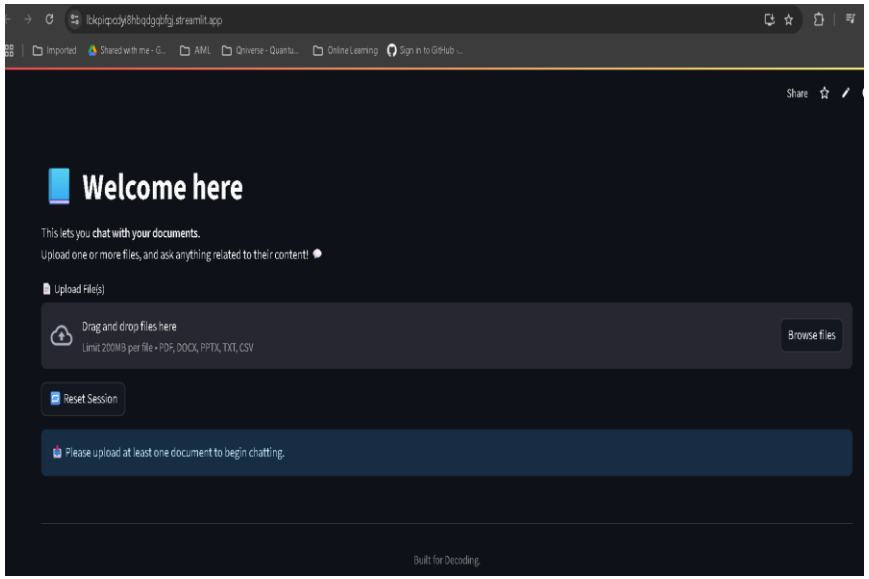
Response



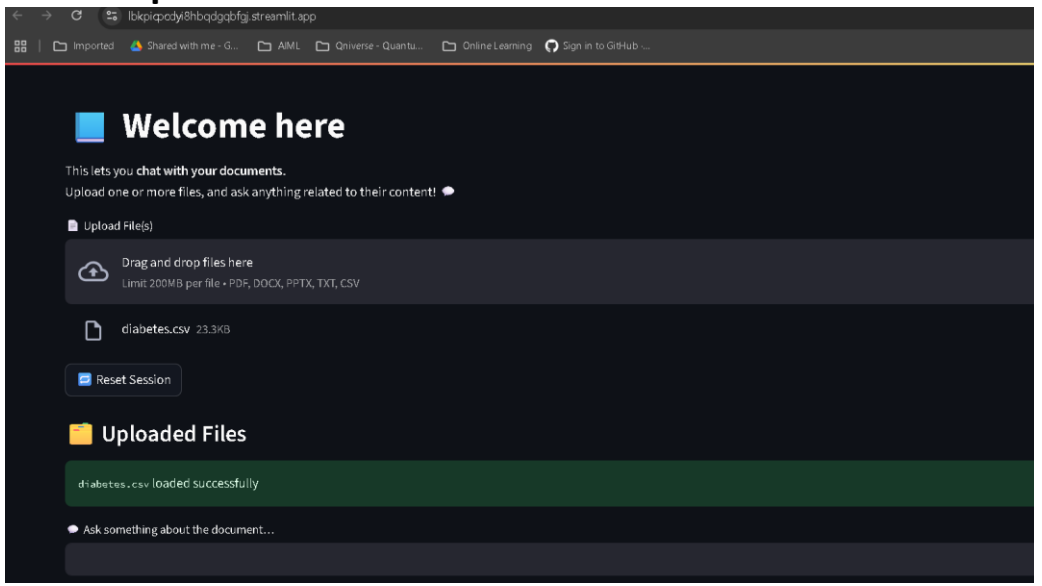
Screenshots

CSV

Home Page



User Input



User Query

Response

what is this csv file is about?

The provided data appears to be a dataset related to medical or health measurements, likely focused on diabetes prediction or a similar health condition. Here's why:

1. **Features (Columns)**:
   - The first column could represent the number of pregnancies (integer values like 0, 1, 2, etc.).
   - The next few columns likely represent medical measurements such as glucose levels (e.g., 187, 146), blood pressure (e.g., 68, 82), skin thickness (e.g., 39, 0), insulin levels (e.g., 304, 0), and BMI (e.g., 37.7, 40.5).
   - The column with values like 0.254, 0.962 might represent a diabetes pedigree function (a genetic risk score).
   - The next column is likely age (e.g., 41, 31).
   - The last column appears to be a binary outcome (0 or 1), possibly indicating the presence (1) or absence (0) of diabetes or another condition.
2. **Potential Source**: This resembles the **Pima Indians Diabetes Dataset**, a well-known dataset in machine learning for binary classification (predicting diabetes). The features align with common predictors like pregnancies, glucose, blood pressure, etc.
3. **Missing/Zero Values**:
   - Some rows have zeros (e.g., insulin = 0), which may indicate missing/unknown values (common in raw datasets).

Summary:

This is likely a **health dataset for diabetes prediction**, where each row represents a patient's medical attributes, and the last column indicates whether they have diabetes (1) or not (0).

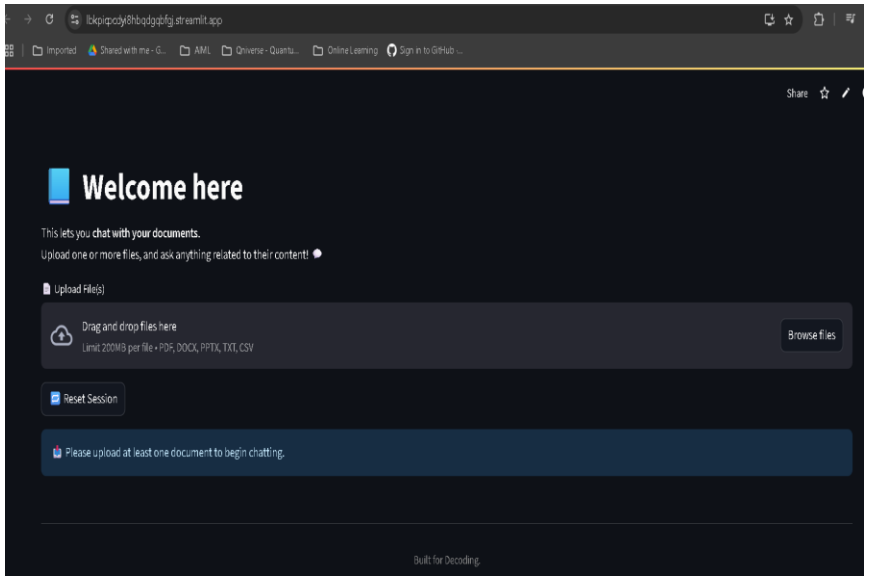
Would you like help analyzing or interpreting specific parts of the data?

Source: diabetes.csv

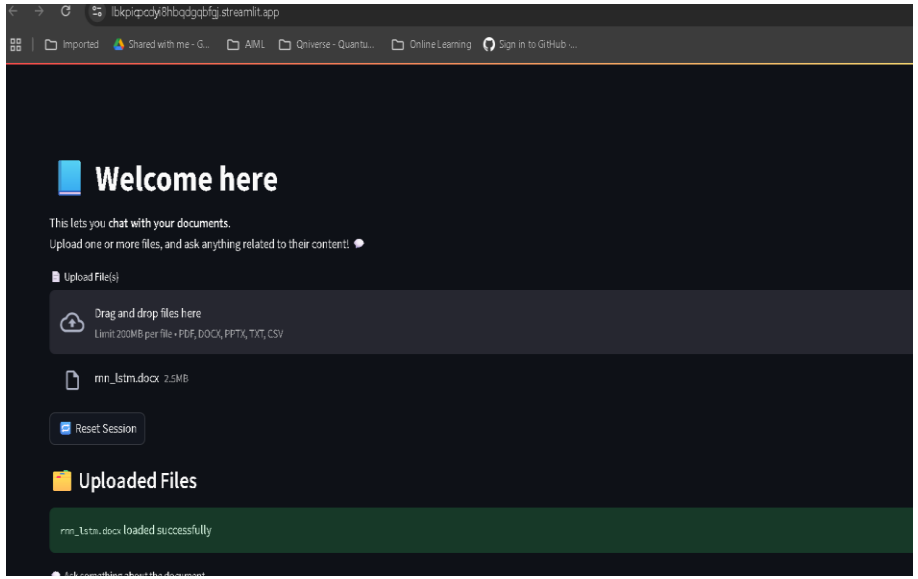
Screenshots

DOCX

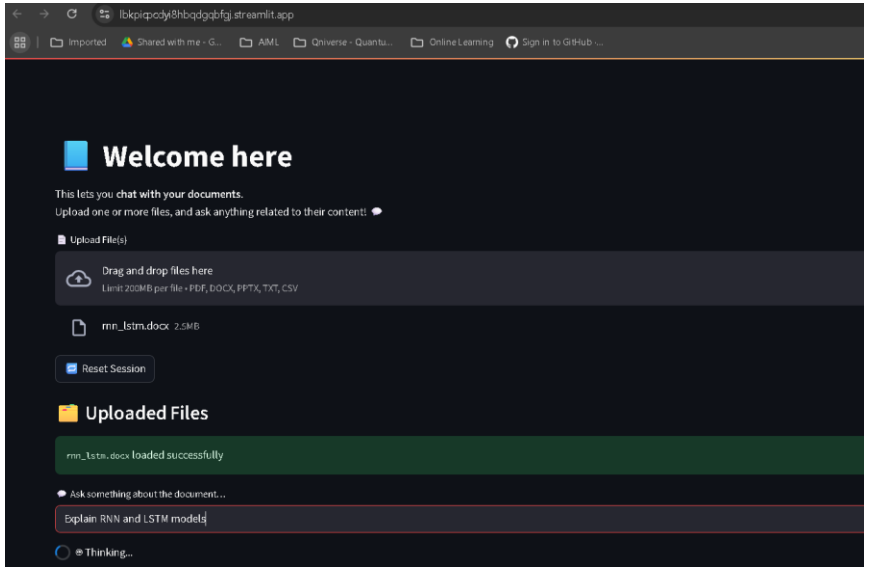
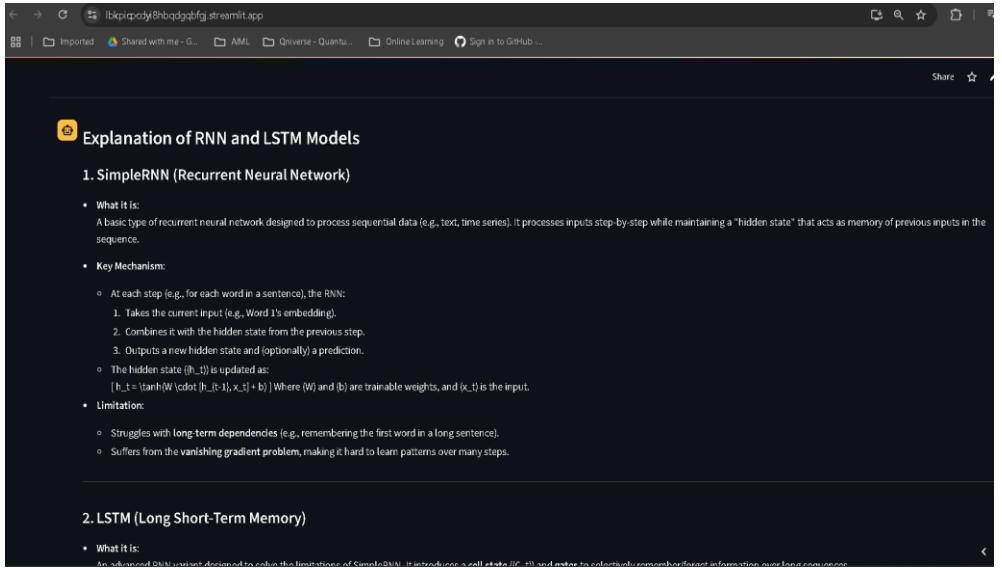
Home Page



User Input



User Query



Response