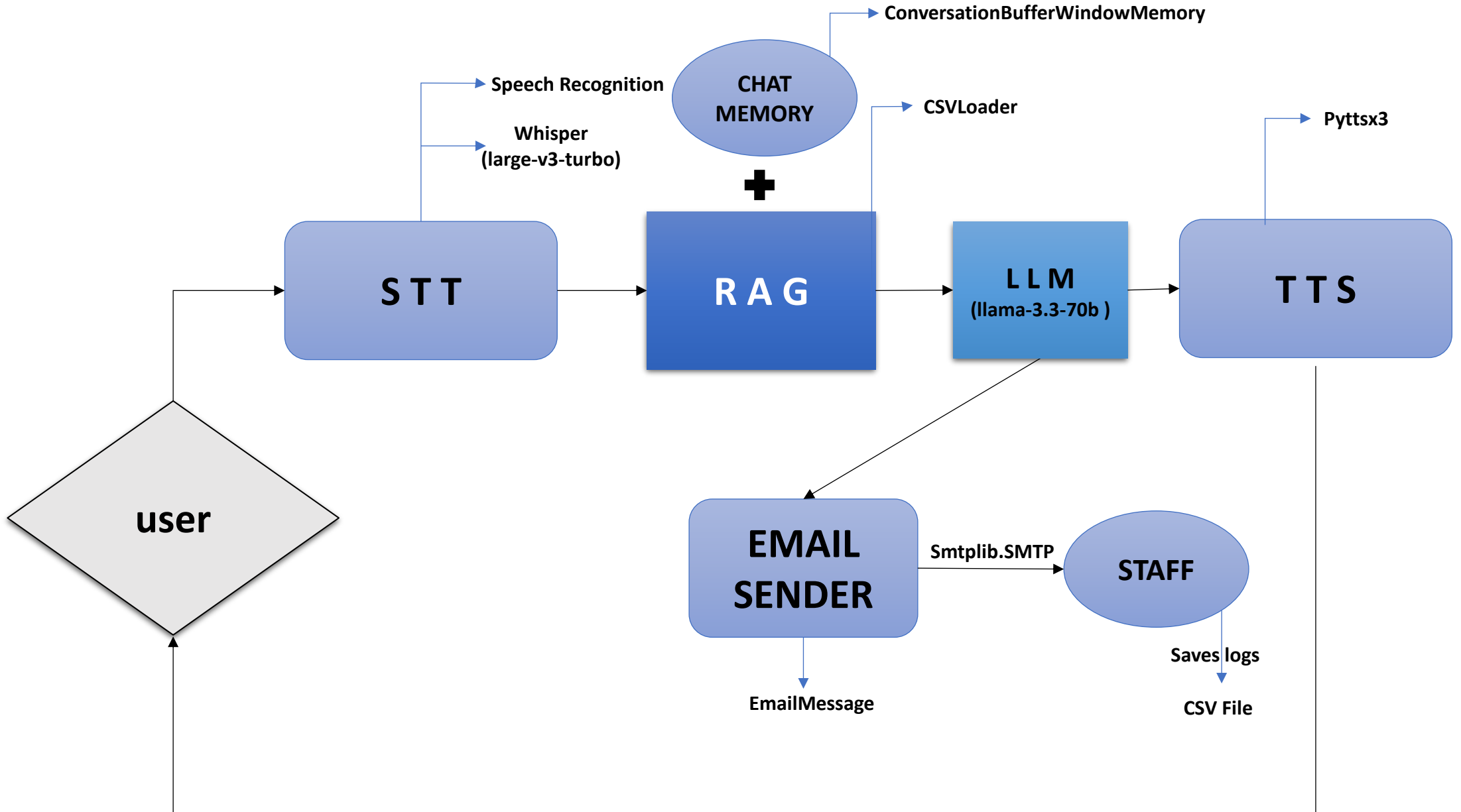


# VOICE BASED AI ASSISTANT

**I developed to automate customer interactions using real-time speech recognition and intelligent question answering on your company details using RAG**

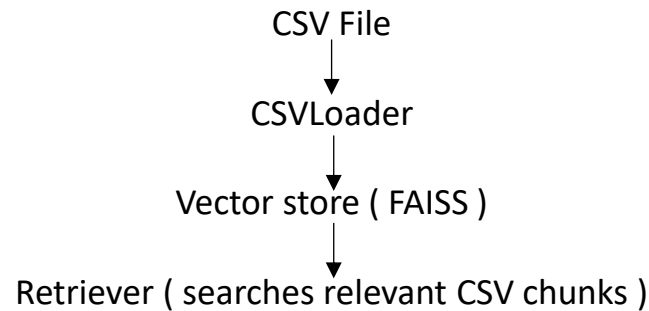


## STEP – 1 : **S T T**

I use both **speech recognition + whisper(large-v3-turbo)** because it was simple mic handling and whisper quality with less setup this is a balanced option **simple code + high transcription quality**.

## STEP – 2 : **RAG + CHAT MEMORY**

Loads data from a **CSV** file using **CSVLoader** answer question using csv data and maintains chat history using **ConversationBufferWindowMemory** remember recent conversation history.



### STEP – 3 : **L L M**

An **LLM** is a machine learning model that can read, write, summarize, translate, and reason using natural language, by learning patterns from huge text datasets.

### STEP – 4 : **T T S**

I used **pyttsx3** is a python text-to-speech(TTS) library that allows your program to convert text into spoken audio using the system's built-in speech engines. It's offline, cross-platform

### STEP – 5 : **EMAIL SENDER**

I used **EmailMessage** for formatting an email message(subject, body, attachment, etc) it is a high-level class for creating and I used **smtplib.SMTP** library for connecting to an SMTP server to actually send the email created above