



AI-Based Customizable Chatbot

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Introduction

Our project is an AI-Based Customizable Chatbot Platform that enables users to interact with customizable chatbot personalities for a personalized and engaging experience.

Why We Built It:

- To explore the intersection of AI and customer service
- To provide users with a flexible, fun, and memory-aware chatbot system
- To provide users with a customizable & personalized chatbot

What Makes It Unique:

- Character-based chatbot customization
- Multiple chatbot personalities (e.g., pirate, detective)
- Persistent session memory and chat exports
- Seamless user experience with modern UI design and backend logic



Key Features

Flexible User Access

Login, register, or continue as guest — accessible to all users.

Custom Chatbot Creation

Users can name their chatbot, select a character, and choose from 10 unique personalities (e.g., pirate, detective, helpful, etc).

Multi-Personality Conversations

Each chatbot behaves according to its personality and remembers context from previous chats.

Multiple Chat Sessions

Users can start new sessions, switch between them, or continue past conversations.

Chat History & Memory

All conversations are stored in the database — enabling memory aware interactions.

Export Functionality

Users can export individual chat sessions for record-keeping or reference.



Welcome to ChatBot!

Your intelligent conversation partner. Get started by choosing how you'd like to proceed.

Login / Register

Continue as Guest

Account Benefits:

- Save your chat history securely in our database
- Access your conversations from any device
- Customize and save your bot preferences
- Create multiple chat sessions

**Creating an account unlocks additional features and saves your preferences.*

Login

Welcome back! Please login to your account.

Email

mohamed_cool@icloud.com

Password

.....

☐ Remember me

[Forgot password?](#)

Login

Don't have an account? [Register](#)

Or [continue as guest](#)

Key Features (Custom Chatbot Creation)

Customize Your Bot

Give your bot a name:

Choose a character:



Robo



Pixie



Buddy



Nova

Preview:



Farra

[Back](#)

[Continue to Chat](#)

Choose Your Bot's Personality



Farra

Select a personality for your bot:

Helpful
A friendly and helpful assistant

Professional
A formal and thorough assistant

Friendly
A cheerful and conversational assistant

Creative
A creative and imaginative assistant

Poetic Soul
An artistic and lyrical assistant

Technical
A technical and precise assistant

Time Traveler
An assistant who has seen many eras

Detective
A sharp and analytical detective

Pirate Captain
A swashbuckling pirate assistant

Chef Bot
A culinary-minded assistant

[Back](#)

Key Features (Multiple Chat Sessions)

 Farra

SettingsReset ChatExport Chat4/11/2025 - Session 48613New Chat

You: Hello, how to cook pink pasta with chicken?
05:14 PM

Farra: Hello! To cook pink pasta with chicken, start by cooking pasta according to package instructions. In a separate pan, cook chicken pieces until browned. Then, prepare a tomato cream sauce by sautéing garlic in olive oil, adding tomato sauce, cream, and seasonings. Mix in the cooked chicken and pasta, then simmer until heated through. Garnish with fresh herbs and grated cheese before serving. Enjoy your pink pasta with chicken! Farra
05:15 PM

You: Do you recommend using heavy cream and tomato paste for the sauce?
05:15 PM

Farra: Yes, heavy cream and tomato paste are commonly used ingredients for making a creamy tomato sauce. The heavy cream adds richness and creaminess to the sauce, while the tomato paste provides a concentrated tomato flavor. Feel free to adjust the quantities based on your preferences for richness and tomato intensity. Enjoy your cooking! Farra
05:15 PM

Type your message here...Send

 Roary

Reset ChatExport Chat4/13/2025 - Session 70641New Chat

You: Hi, Can you give me an overview of FIU?
05:00 PM

Roary: Ahoy there, matey! FIU be a university in the land of knowledge, a place where young minds set sail on the sea of learning to discover new horizons and chart their own courses. FIU be a treasure trove of opportunities, with professors as wise as old sea captains and students as spirited as a crew ready to take on any challenge. If ye be seeking to embark on a journey of education and growth, FIU be a port worth considering. Fair winds and following seas on your academic voyage, matey! Captain Roary of the digital seas
05:00 PM

You: That's interesting, can you provide me details about KFSCIS in FIU?
05:09 PM

Roary: Ahoy, matey! KFSCIS be a part of the FIU fleet known as the Knight Foundation School of Computing and Information Sciences. This be a mighty ship in the university's armada, sailing the digital seas with cutting-edge technology and knowledge. KFSCIS be like the navigator of the fleet, guiding students through the ever-changing currents of the digital world and preparing them to brave the storms of the technological age. Ye can think of KFSCIS as a lighthouse in the dark, shining a beacon of guidance for those who seek to explore the vast ocean of information and computing. If ye be looking to set sail in the realm of technology and innovation, KFSCIS be a treasure trove waiting to be
05:09 PM

Type your message here...Send



Tools & Technologies Used

✦ React Frontend:

- **React** – Component-based UI development
- **HTML, CSS, JavaScript** – Core web technologies for layout and styling
- **Node.js** – Backend environment for handling client-server interactions

🧠 Flask Backend:

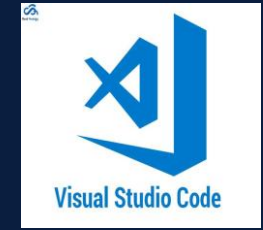
- **Python** – Logic and server-side scripting
- **OpenAI API** – AI-driven responses with personality-based behavior
- **Flask** – For handling API endpoints

🗄️ PostgreSQL Database:

- **PostgreSQL** – Stores user data, chatbot configurations, and chat history

🔧 Additional Tools:

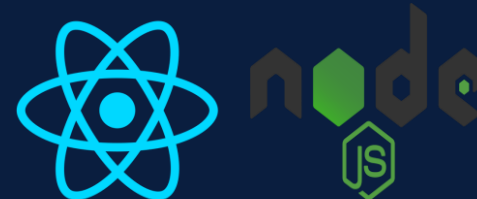
- **Git & GitHub** – Version control and collaboration
- **VS Code** – Development environment
- **Postman** – API testing
- **pgAdmin** – PostgreSQL management



HTML

CSS

JS



FIU

Engineering
& Computing

System Design & Architecture

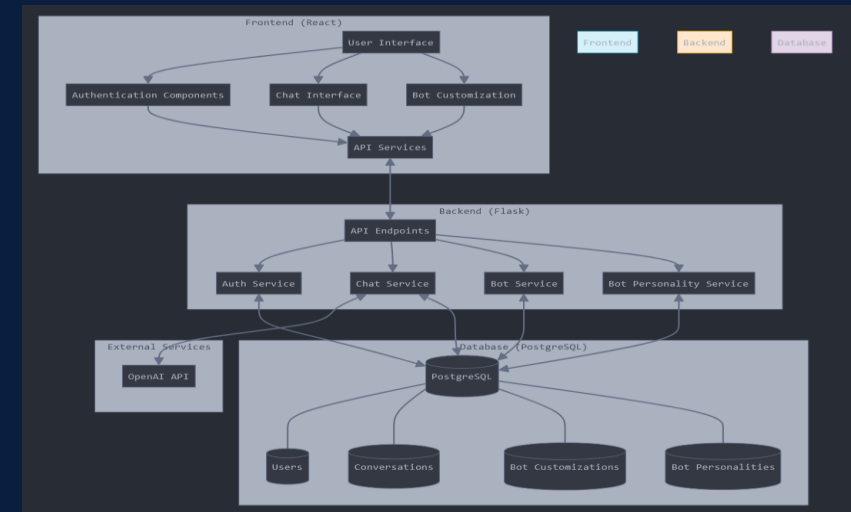
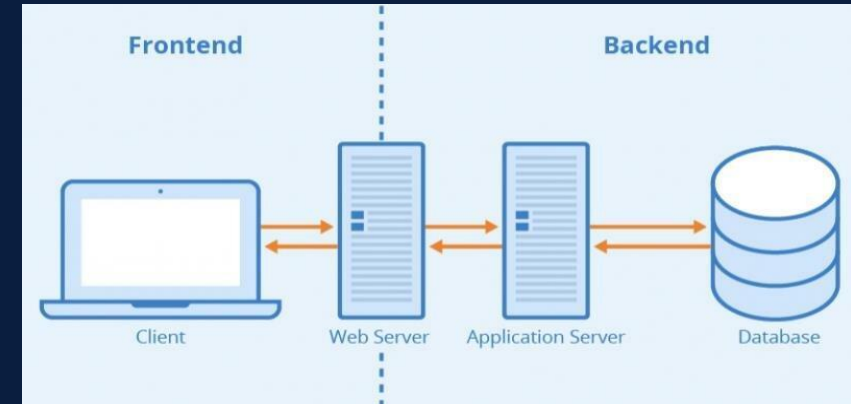
Our System is a full-stack development system that follows a client-server architecture that consists of:

Client:

- Frontend React Website made up of HTML, CSS, JavaScript, React and Node.js.
- Offers great UI for user to interact with the chatbot
- Sends user input to backend

Server:

- Backend Flask python server that has the main functionalities of the chatbot implemented using OpenAI API.
- Sends user messages to openAI API and sends chatbot responses back to the frontend website
- Sends data to be stored in a PostgreSQL database
- Data stored include user info, user messages, chatbot responses, chatbot personalities and more.





Future Additional Features

Public Deployment

- Host the project online to make it accessible via a public link (e.g., using Render, Vercel, or AWS).
- Improves accessibility, usability, and potential for real user testing.

Add Voice Integration

- Implement voice-to-text and text-to-speech features for hands-free interaction.

Expand Chatbot Personalities

- Introduce new character themes (e.g., teacher, therapist, superhero) for broader user engagement.

Analytics Dashboard

- Provide users/admins with insights into chatbot usage, session stats, and engagement levels.

Third-Party Integrations

- Connect with platforms like Slack, Discord, or customer support CRMs for real-world deployment.

Mobile Compatibility

- Optimize the chatbot interface for mobile devices and release as a PWA or native app.



Conclusion

Our AI-based customizable chatbot project demonstrates the integration of modern web development with intelligent, customizable AI communication.

It offers a **personalized user experience**, allowing users to interact with chatbots that have memory, unique characters, and engaging personalities.

We built a scalable and modular system, combining a React-based frontend, Python backend with OpenAI API, and PostgreSQL database.

While it currently runs locally, this project lays the foundation for a fully hosted, accessible platform in the future.

This project highlights our team's ability to design, develop, and deploy a **real-world AI-driven application** using full-stack development principles.

