

NITIKANEXUS

Your AI chatbot for all things Nitika!

<https://nitkanexus.vercel.app>

NAME OF PROJECT:

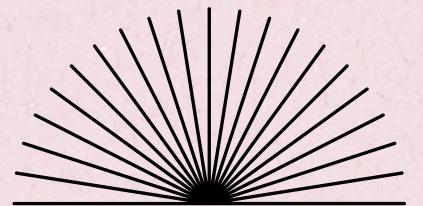
AI Chatbot

PRESENTED BY:

Nitika Borkar

PRESENTED TO:

SAP



Project Overview

NitikaNexus is a personalized, AI-powered chatbot named after its creator, Nitika. It is designed to engage users with intelligent, responsive conversations, providing helpful information, answering queries, and offering support in a manner that feels uniquely tailored to the user.

The chatbot leverages advanced natural language processing (NLP) techniques to understand user intent, making it versatile in handling a wide range of topics.

The project showcases integration between a React frontend and a python backend, hosted on Vercel and Heroku, respectively.

Tech Stack

Frontend:

- React: For building a dynamic and responsive user interface.
- CSS: Custom styling to ensure a clean, modern look and feel.
- Vercel: For seamless deployment and hosting of the frontend application.

Backend:

- Python & Flask: A lightweight framework for serving the backend API, handling requests, and managing the chatbot's core logic.
- OpenAI API: Utilized for accessing advanced GPT models to power the chatbot's conversational capabilities.
- LangChain: Integrated to manage the chaining of LLM calls and context management, enhancing the chatbot's ability to handle multi-turn conversations.
- Retrieval-Augmented Generation (RAG): Implemented to combine real-time data retrieval with LLM outputs, enabling more accurate and context-rich responses.
- Heroku: For hosting the backend, ensuring reliable performance and easy scalability.

Data Management:

- Vector Stores: Used for storing and retrieving embeddings that represent the chatbot's knowledge base, enabling efficient and accurate information retrieval during conversations.

User Interface

NitikaNexus



NitikaNexus: Hiya! 🌟 I'm NitikaNexus 🤖, your go-to AI for all things Nitika! Whether you're curious about her work, her favorite Netflix shows, or just want to know what she's up to when she's not coding away—ask away! Let's get started! 💻

You: what does nitika study

NitikaNexus: Nitika Borkar is studying for a Bachelor of Engineering in Computer Science at Nanyang Technological University in Singapore. She has a deep interest and focuses on data science, machine learning, and artificial intelligence. Her relevant coursework includes Algorithm Design and Analysis, Operating Systems, Introduction to Data Science & Artificial Intelligence, and Software Engineering, among others. If you have more questions about her studies or academic interests, feel free to ask!

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You: what does she want to join SAP

NitikaNexus: Nitika Borkar wants to join SAP because she is excited about the opportunity to contribute to SAP's cutting-edge AI innovations and to witness their impact on businesses worldwide. She is particularly drawn to the chance to develop novel machine learning models and see them implemented in real-world applications, which aligns perfectly with her career goals in AI and data science.

Nitika believes that the internship at SAP AI Business Services will provide her with the perfect platform to merge her academic background with practical experiences, allowing her to work on both research and production projects. She is eager to tackle the challenges of developing and deploying machine learning models and is enthusiastic about the possibility of contributing to SAP's pioneering AI initiatives.

You: what is her area of interest

NitikaNexus: Nitika Borkar's areas of interest include:

1. Data Science - She has a deep interest in analyzing and interpreting complex data to derive insights.
2. Machine Learning - Nitika is enthusiastic about utilizing algorithms and statistical models that enable computers to perform tasks without explicit instructions, learning from data.
3. Artificial Intelligence - Her passion for AI extends to developing intelligent systems that can simulate human-like cognition.

These interests drive her academic pursuits and career aspirations, and she is keen on exploring innovations in these fields.

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Intelligence, and Software Engineering, among others. If you have more questions about her studies or academic interests, feel free to ask!

You: what does she like to do in her free time?

NitikaNexus: In her free time, Nitika enjoys a variety of activities. Some of her hobbies and interests include:

1. Traveling - She loves exploring new places, immersing herself in different cultures, and creating memorable experiences.
2. Watching Formula 1 - As an avid fan, she finds excitement in the high-speed action and strategy of the sport.
3. Dancing - This is a creative outlet for her to express herself, stay active, and have fun, whether it's to pop, Bollywood music, or R&B.
4. Listening to Music - Nitika enjoys pop, Bollywood, and R&B music, and considers music a constant companion in her daily life.
5. Watching Movies and TV Series - She particularly enjoys Netflix series like "Suits," "Friends," "Modern Family," and "Grey's Anatomy," as well as movie nights with a variety of genres.

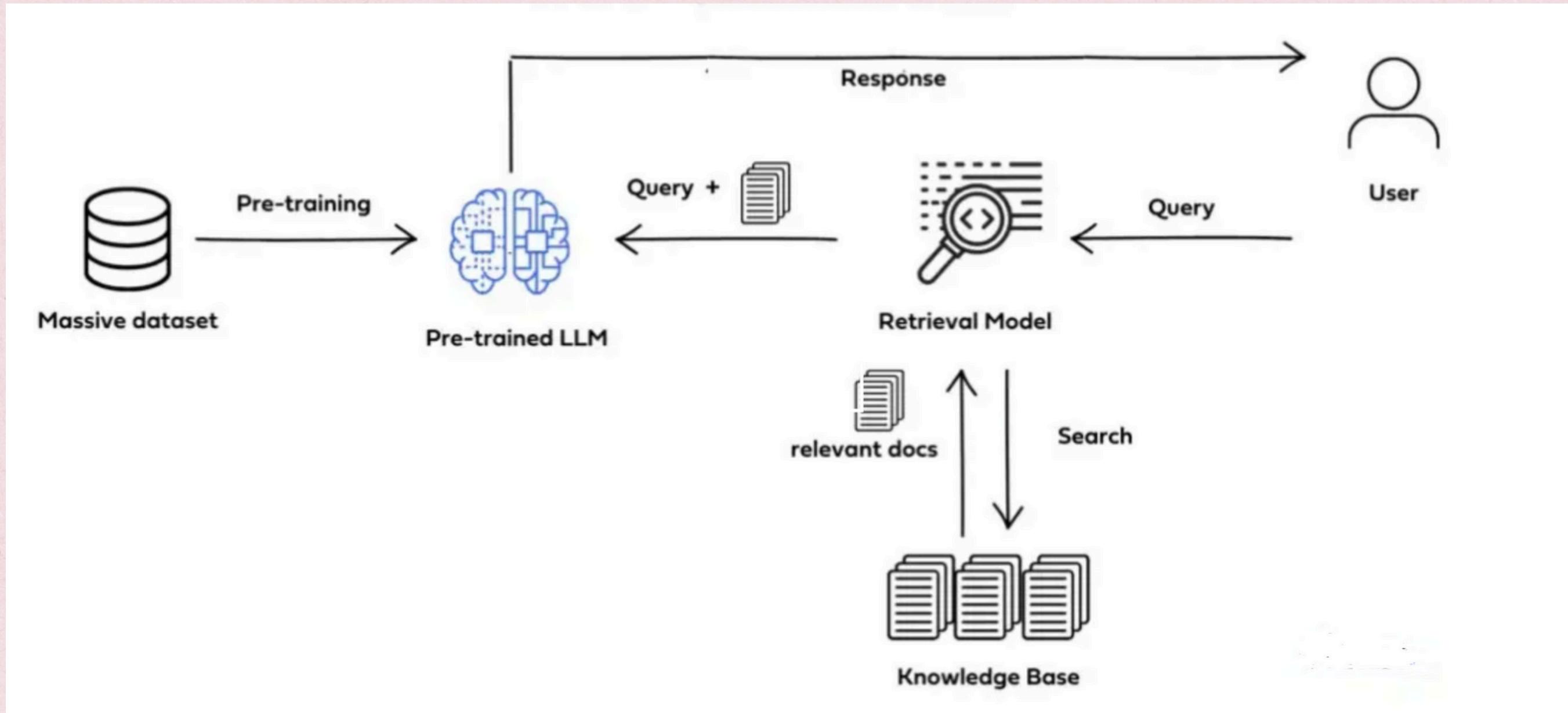
These activities help her maintain a balanced lifestyle and provide relaxation and inspiration that she integrates into both her personal and professional life.

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System Architecture



Deployment

1. Backend Deployment (Heroku)

Setup:

Heroku Account & CLI: Created account and installed CLI.

Configuration Files:

Procfile: Defines how to run the application.

requirements.txt: Lists Python dependencies.

Process:

Initialize Git: Ensure project is in Git.

Create & Deploy:

heroku create

git push heroku main

Migrate & Monitor:

heroku run python manage.py migrate

heroku logs --tail

Post-Deployment:

Environment Variables & Add-ons

Frontend Deployment (Vercel)

Setup:

Vercel Account & Repository: Linked GitHub repo.

Process:

Automatic Deployments: On push to main.

Manual Deployment: Deploy via Vercel dashboard if needed.

Post-Deployment:

Domain Configuration & Environment Variables

Thank You
