

Boss Wallah – Course Support Chatbot (RAG + Agentic + Multilingual)

1. Introduction

This project implements an AI-powered support chatbot for Boss Wallah courses. It combines Retrieval-Augmented Generation (RAG) with an Agentic router that decides whether to answer from the dataset (courses info) or query external APIs (Google Maps).

The chatbot also supports multilingual queries (Hindi, Tamil, Telugu, Kannada, Malayalam, English).

2. Objectives

- Build a course information chatbot with RAG.
- Integrate external tool (Google Maps) for location-based queries.
- Support multi-language queries and answers.
- Provide structured, tabular responses for dataset answers.

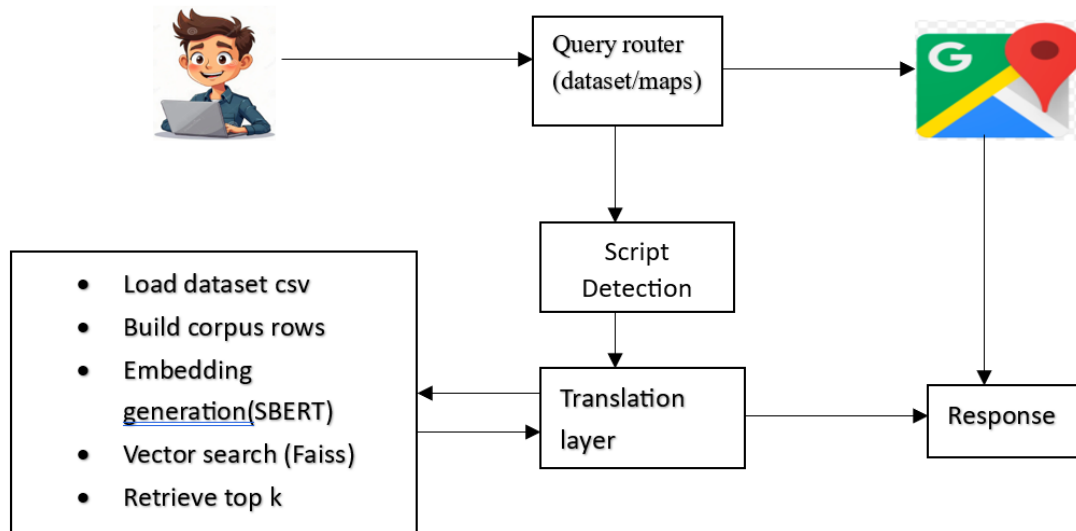
3. Workflow

1. User Input (Query) → Entered in Streamlit.
2. Router Decision → Detect if query belongs to:
 - Dataset → Course information (via FAISS + RAG).
 - Maps → Location information (via Google Maps API).
3. Script Detection → Identify query language.
4. Translation → Answers translated into user's language.
5. Display → Answer shown in structured table or text.

4. Tech Stack

- Frontend: Streamlit
- Embeddings: Sentence-BERT (all-MiniLM-L6-v2)
- Vector Search: FAISS
- Translation: Deep Translator (Google Translate)
- External API: Google Maps Places API
- Language Handling: Regex Unicode detection

5.SYSTEM ARCHITECTURE



6. Example Use Cases

1. Course Query (English):

- Input: “Tell me about Honey Bee Farming course”
- Output: Table with course title, description, who it’s for, available languages.

2. Course Query (MALAYALAM):

- Input: “ഒരു ഡയറി ഫാം തുടങ്ങാൻ എത്ര പശുക്കൾ വേണം?”
- Output: Answer translated to Malayalam.

3. Location Query:

- Input: Are there any stores near Whitefield, Bangalore where I can buy seeds for papaya farming?
- Output: Table with store name, address, rating.

7.Screenshots of output

TASK1. Tell me about honey bee farming course

Boss Wallah – Course Support Chatbot (RAG + Agentic)

Ask about Boss Wallah courses or local info:

Tell me about honey bee farming course

Ask

Answer

	Course Title	About Course	Who This Course Is For	Available Languages
0	Course on Honey Bee Farming	Transform Your Passion for Bees into a Lucrative Career: Join Our Honey Bee Farming Course Now!	<ul style="list-style-type: none">• Beginners looking to start a career in beekeeping• Experienced beekeepers looking to expand their knowledge and skills• Entrepreneurs interested in starting their own beekeeping business• Farmers and landowners looking to diversify their income• Anyone with a passion for bees and a desire to learn about the industry	Hindi, Kannada, Malayalam, Tamil, Telugu, English
1	Pig Farming Course	Pig Farming Course teaches you how to raise and sell pigs, unlocking the potential for significant annual earnings.	<ul style="list-style-type: none">• Aspiring pig farmers looking to start a pig farming business in India• Existing pig farmers looking to improve their farming practices and increase their profits• Individuals interested in the pig farming industry and seeking to gain knowledge and skills• Entrepreneurs and business owners seeking to diversify their portfolios• Anyone looking to learn the ins and outs of the pig farming business and capitalize on its potential for financial success	English
2	Integrated Farming Course	Harness the Power of Year-Round Farming and Reap the Benefits Every Day. Start Now!	<ul style="list-style-type: none">• Farmers who have suffered financial loss• They are determined to do agriculture anew.• Whether you are interested to learn about agriculture, don't hesitate to join the course.• Those who thought that farming should be done with modern methods• Those who are already tech-savvy	Hindi, Kannada, Malayalam, Tamil, Telugu, English

TASK 2. I want to learn how to start a poultry farm

Boss Wallah – Course Support Chatbot (RAG + Agentic)

Ask about Boss Wallah courses or local info:

I want to learn how to start a poultry farm

Ask

Answer

	Course Title	About Course	Who This Course Is For	Available Languages
0	Poultry Farming Course	Egg-celent Opportunities: Start your own Poultry Farm with our Comprehensive Business Course	<ul style="list-style-type: none">• Beginner farmers looking to start a poultry farming business• Experienced farmers looking to expand their current operations• Entrepreneurs interested in starting a poultry farming venture• Agricultural students or professionals wanting to specialize in poultry farming• Anyone looking to supplement their income by starting a poultry farm as a side business.	Hindi, Kannada, Malayalam, Tamil, Telugu, English
1	Integrated Fish & Poultry Farming Course	Learn the art of integrated fish and poultry farming, combining two profitable industries into one	<ul style="list-style-type: none">• Aspiring Entrepreneurs to start their own business and earn a sustainable income• Farmers who want to expand their knowledge and skills• Agri-Entrepreneurs who are already involved in agriculture and want to venture into a new area• Individuals with Land and want to utilize it for a profitable business• Students of Agriculture who want to specialize in integrated fish and poultry farming	Kannada

TASK 3. Do you have any courses in Tamil?

Boss Wallah – Course Support Chatbot (RAG + Agentic)

Ask about Boss Wallah courses or local info:

Do you have any courses in Tamil?

Ask

Answer

- Course on Financial Freedom
- Mutual Funds Course
- Course on Credit Cards
- Course on Credit Score
- Course on Stock Market
- Term Insurance Course
- Course on Starting a Business
- Personal Loan Course
- Home Loan Course
- Career Building Course
- Course on Health Insurance
- Education Loan Course
- How to Earn 1 Lakh/Month from 1 Acre of Farmland
- Course on Starting a Global Business from a Village
- Sheep & Goat Farming Course
- Course on Honey Bee Farming
- Poultry Farming Course
- Fish & Chicken Retailing Business Course

TASK 4. I am a recent high school graduate, are there any opportunities for me?

Boss Wallah – Course Support Chatbot (RAG + Agentic)

Ask about Boss Wallah courses or local info:

I am a recent high school graduate, are there any opportunities for me?

Ask

Answer

	Course Title	About Course	Who This Course Is For	Available Languages
0	Career Building Course	Developing Your Dream Career: A Step-by-Step Guide to Building Your Dream Career	<ul style="list-style-type: none">Individuals who are starting out in their career and want to build a solid foundation for future successProfessionals looking to make a career change or transition into a new fieldPeople who want to learn practical, actionable strategies for building a successful careerJob seekers who want to improve their resume and interviewing skills to increase their chances of landing a jobAnyone who wants to take control of their career and build the future they want.	Hindi, Kannada, Malayalam, Tamil, Telugu, English
1	Course on Earning while you Learn	Unlock the secrets to earning money while you learn and build a successful career with this essential course!	<ul style="list-style-type: none">Students from any field who wish to earn while developing job-ready skills can benefit from this courseAspiring professionals who want to gain practical skills that can be used to build a successful careerStudents who are interested in learning about the success stories of people who started earning while studyingYoung entrepreneurs who want to learn how to start and grow a business while studyingStudents who want to learn how to balance work and studies while earning money	Kannada

BONUS TASK 1:

Ask the chatbot how many cows you will need to start a dairy farm from any of the given languages: Telugu, Hindi, Kannada, Tamil, Malayalam [the bot must respond in the same language]

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Ask about Boss Wallah courses or local info:

ഒരു ഡയറി ഫാറം ആരംഭിക്കാൻ എത്ര പശുക്കൾ വേണം?

Ask

Answer

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BONUS TASK 2:

Are there any stores near Whitefield, Bangalore where I can buy seeds for papaya farming?

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Ask about Boss Wallah courses or local info:

Are there any stores near Whitefield, Bangalore where I can buy seeds for papaya farming?

Ask

Answer

	name	address	rating
0	Healthy Buddha	Site 113/1, ITPL Main Rd, opp. Brookefield, near inbetween Jaguar Showroom & transtree hotel, AECS Layout, Brookefield, Bengaluru, Karnataka 560037, India	4.2000
1	The Organic World - Whitefield	Ground floor, No.66, Miraya Rose, Varthur Main Rd, Palm Meadows, Siddapura, Whitefield, Bengaluru, Karnataka 560066, India	4.5000
2	Fresh "N" Farms	Nallurahalli, Borewell Rd, Dodsworth Layout, Whitefield, Bengaluru, Karnataka 560066, India	4.8000
3	SAMRUDH SEEDS PRIVATE LIMITED	318, 6th Main Rd, Stage 1, KHB Colony, Basaveshwar Nagar, Bengaluru, Karnataka 560079, India	4.9000
4	GreenDNA India Pvt Limited	52, 4th Main Rd, Sun City Layout, JP Nagar 7th Phase, Bengaluru, Karnataka 560078, India	4.7000