IBM AICTE PROJECT

IIT Admission Agent

Presented By: Anish Dattatray Pote Student name: Anish Dattatray Pote

College Name : PCET's Pimpri Chinchwad College of Engineeirng

Department: Computer Engineering



OUTLINE

- Problem Statement
- Proposed Solution
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Future scope
- IBM Certifications
- Git-hub Link



Problem Statement

College Admission Agent (RAG Based)

The Challenge - A College Admission Agent, powered by RAG (Retrieval-Augmented Generation), streamlines the student admission process. It retrieves and summarizes admission policies, eligibility criteria, and FAQs from institutional databases and official sources. Prospective students can ask natural language questions and receive accurate, up-to-date responses instantly. The agent helps with course selection, application guidance, fee structure, and important deadlines. Using trusted, real-time data, it reduces manual inquiries and enhances applicant experience. This Al-driven assistant boosts transparency, accessibility, and efficiency in college admissions.



Proposed Solution

We propose an AI-powered College Admission Agent specifically for IIT Bombay, built using Retrieval-Augmented Generation (RAG). This intelligent assistant allows students to ask natural language questions and instantly receive accurate, relevant answers grounded in official institutional documents like admission brochures, fee structures, and eligibility criteria.

The agent retrieves information from a vectorized knowledge base and uses IBM's Granite Large Language Model (LLM) on Watsonx.ai to generate clear, student-friendly responses. It enhances transparency, reduces manual workload for admission offices, and improves the overall applicant experience.



Technology Used

- IBM Watsonx.ai
- IBM Granite Foundation Model
- Retrieval-Augmented Generation (RAG)
- Vector Indexing
- LangGraph Framework
- ReAct Architecture
- IBM Cloud Lite Services



IBM cloud services used

- IBM Watsonx.ai Studio
- IBM Watsonx.ai Runtime
- IBM Granite Foundation Model
- IBM Cloud Object Storage
- IBM Cloud Agent Lab



Wow factors

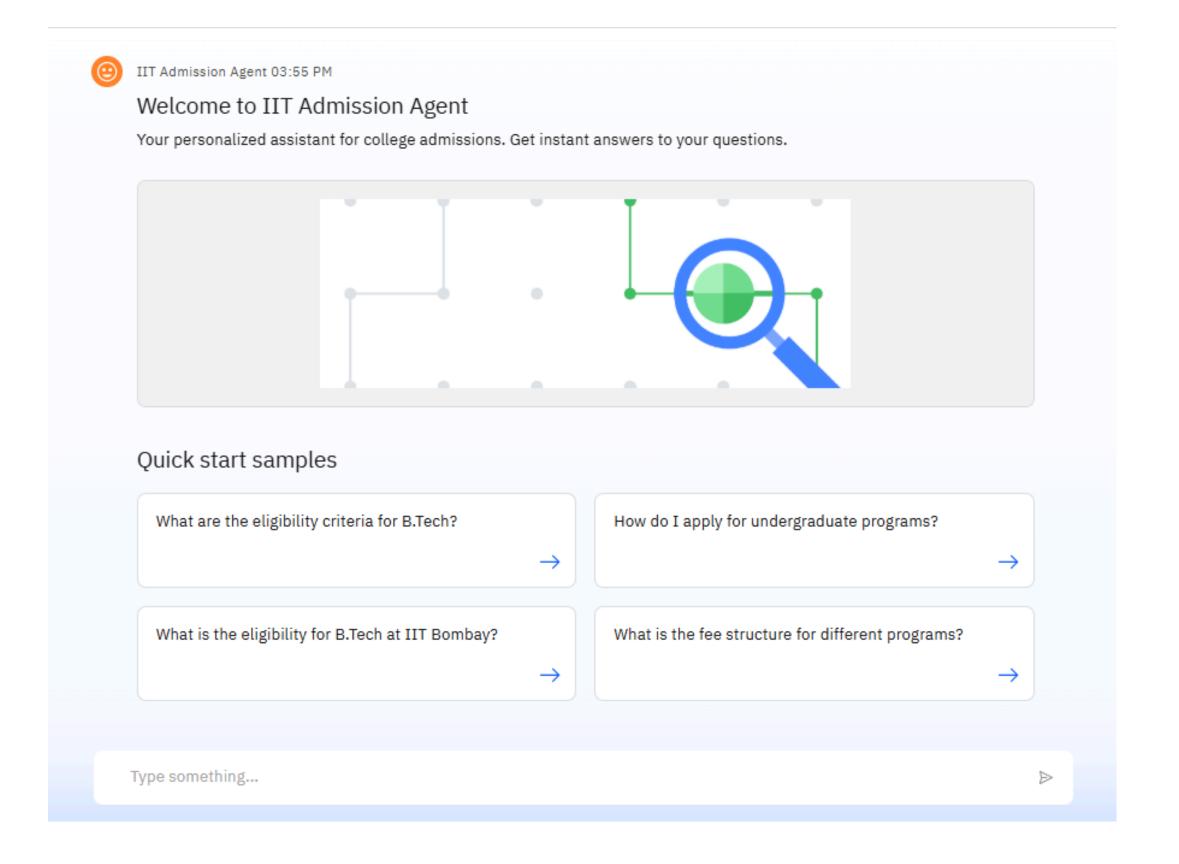
- Al That Understands College Admissions
- Answers student queries in natural language using real IIT Bombay data like brochures, eligibility criteria, and deadlines.
- Real-Time, Accurate, Trusted Information
- Uses Retrieval-Augmented Generation (RAG) to ensure answers are always based on verified institutional documents no hallucinations.
- Reduces Manual Workload for College Staff
- Automates repetitive inquiries and FAQs, saving hours for admission officers and helpdesks.
- Boosts Accessibility for Students Across India
- Helps rural or first-gen college applicants who may struggle to navigate confusing, scattered information.
- Fast, Scalable & Customizable for Any Institute
- Built on IBM Watsonx with a modular setup that can easily scale to support other colleges, states, or even countries.
- Smart Document Understanding
- Uploading a single PDF admission brochure lets the AI instantly extract and serve detailed policy-level answers.



End Users

- Prospective Students
- Parents & Guardians
- School Counselors & Career Advisors
- College Admission Helpdesk Staff
- International Applicants
- Education Consultants & Coaching Centers









You 04:10 PM

What are the eligibility criteria for B.Tech?



IIT Admission Agent 04:10 PM

To be eligible for the B.Tech program at IIT Bombay, you generally need to meet the following criteria:

- Academic Qualification: You must have passed 10+2 or equivalent examination with Physics, Chemistry, and Mathematics
 as compulsory subjects.
- Percentage: You need to secure a minimum of 75% aggregate marks (for General and OBC-NCL categories) or 65% aggregate marks (for SC, ST, and PwD categories) in 10+2 or equivalent examination.
- 3. JEE (Joint Entrance Examination) Advanced: You must qualify in JEE (Advanced) or appear for it.

Please note that these are general criteria and can vary. For the most accurate and updated information, I recommend checking the official IIT Bombay admission website or using the RAGQuery tool.



You 04:10 PM

What is the eligibility for B.Tech at IIT Bombay?



IIT Admission Agent 04:10 PM

To be eligible for the B.Tech program at IIT Bombay, you typically need to meet these criteria:

Type something...







You 04:14 PM

How do I apply for B.Tech at IIT Bombay?



IIT Admission Agent 04:14 PM

To apply for B.Tech at IIT Bombay, follow these general steps. However, always refer to the official IIT Bombay admission website for the most accurate and updated information:

- 1. JEE (Joint Entrance Examination) Advanced: First, you need to qualify in JEE (Advanced) or appear for it.
- Registration: After the JEE (Advanced) results are declared, you can register for the B.Tech program on the IIT Bombay's JoSAA (Joint Seat Allocation Authority) portal. The registration window typically opens in June.
- Seat Allocation: Based on your rank in JEE (Advanced) and the seats available, you will be allocated a seat. You will need to accept the seat and complete the necessary document verification.
- Document Verification: Once you accept the seat, you will need to submit the required documents for verification. This is
 usually done online.
- 5. Fee Payment: After document verification, you will need to pay the admission fee.
- 6. Reporting: Finally, report to IIT Bombay as per the instructions provided during seat allocation.

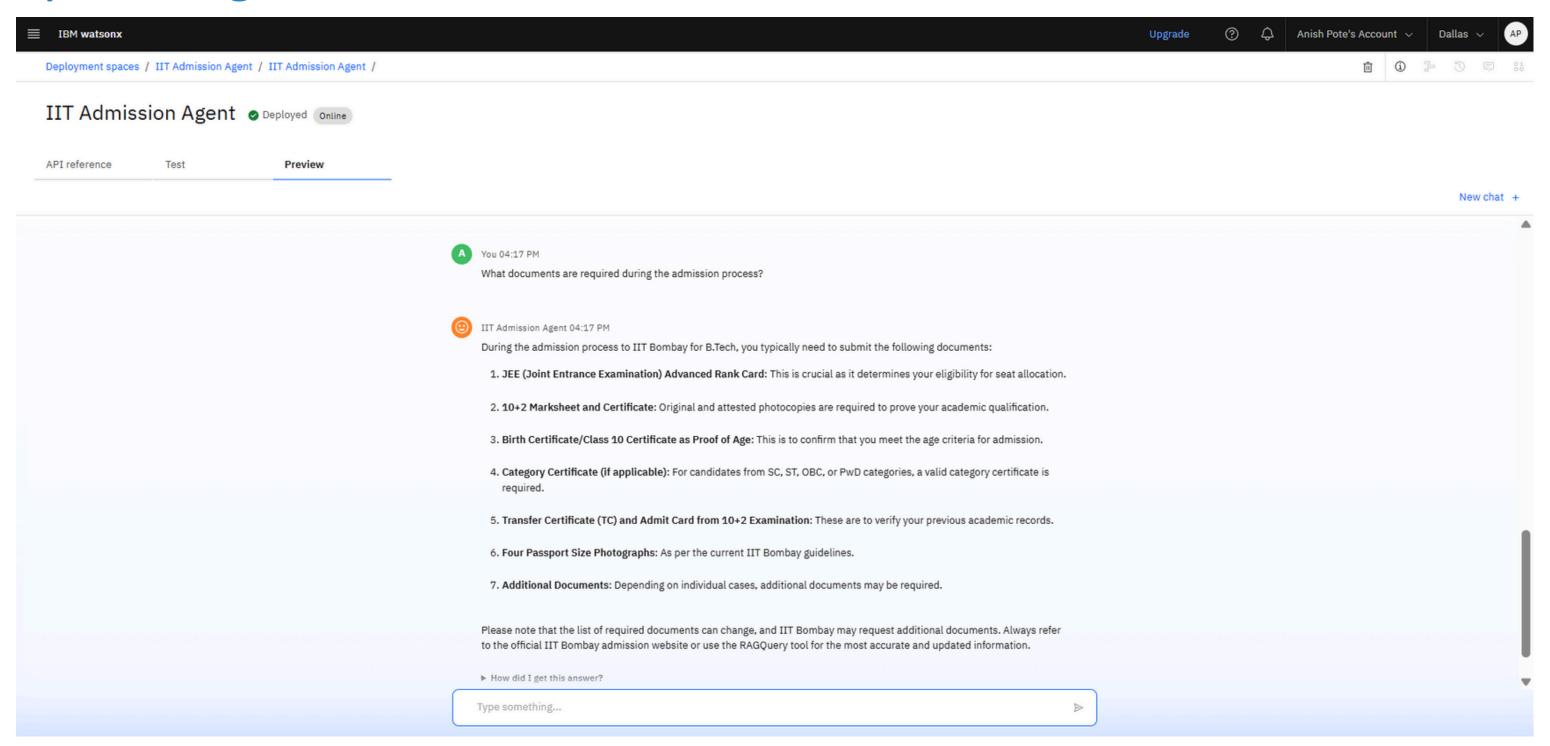
Remember, these are general steps and the exact process, dates, and requirements can change. Always check the official IIT Bombay admission website or use the RAGQuery tool for the most accurate information.

Type something...





Deployed Al Agent





Conclusion

- The IIT Admission Agent successfully demonstrates how AI can transform the college admission experience through intelligent automation. Powered by Retrieval-Augmented Generation (RAG) and built using IBM Watsonx.ai and Granite LLM, the agent delivers instant, accurate answers grounded in official institutional documents.
- It simplifies the complex admission process, improves accessibility for students, and reduces the workload for college staff. This project highlights the real-world impact of AI in education and sets the foundation for scalable, transparent, and student-friendly admission systems.



Future scope

- Multilingual Capabilities
- Voice-Enabled Assistant
- Application Status Tracking
- Calendar Integration
- Mobile App Deployment
- Personalized Counseling



IBM Certifications

In recognition of the commitment to achieve professional excellence



Anish Pote

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 16, 2025 Issued by: IBM SkillsBuild

Verify: https://www.credly.com/badges/042bf82e-543a-467a-b4ba-0a4ea0d19292





IBM Certifications

In recognition of the commitment to achieve professional excellence



Anish Pote

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 18, 2025
Issued by: IBM SkillsBuild

Verify: https://www.credly.com/badges/676135c0-3dd4-4130-8e01-4c5d45243a1c





IBM RAG LAB Certification

7/18/25, 6:14 PM Completion Certificate | SkillsBuild

IBM SkillsBuild

Completion Certificate



This certificate is presented to

Anish Pote

for the completion of

Lab: Retrieval Augmented Generation with LangChain

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 16 Jul 2025 (GMT)

Learning hours: 20 mins



GitHub Link:

https://github.com/AnishPote/IIT-Admission-Agent



THANK YOU

