

Data Science Institute: Agents, Spring 2025

The University of Chicago's Data Science Institute needed a faster, more accessible way for students, staff, and visitors to get answers about its programs and events. To address this, a group of students developed a user-friendly online chatbot capable of answering complex questions. The first step in building the chatbot was evaluating multiple open-source "agentic frameworks"—systems that let chatbots flexibly decide how to find and deliver the best answer to a user's question. The students chose the framework that made it possible to combine information from multiple sources, like the DSI's website and social media platforms, and tailor the chatbot's behavior to the DSI's needs. A key aspect of the chatbot's success is the use of the retrieval augmented generation (RAG) method. This approach allows the chatbot to access relevant, up-to-date information while generating a response to a user's question, resulting in more informed and accurate responses. Special care was taken to keep the system secure, professional, and reliable, including built-in checks to prevent spam and ensure accuracy. The chatbot successfully answered most questions during testing and is now available online, making it easier for students and staff to connect with the Data Science Institute's resources and events.

