I've created a Custom Knowledge Base Chatbot with the following features:

Key Features:

1. AWS Integration Ready

Built to integrate with Amazon Bedrock's Knowledge Base feature

Supports multiple data sources: Aurora PostgreSQL, S3, OpenSearch, Kendra

Real-time connection status monitoring

2. Intelligent Search

Searches through company documents and databases

Source attribution for transparency

Relevance scoring for results

3. User Interface

Clean, modern chat interface

Sample questions to get started

Real-time message streaming

Connection status indicators

4. Data Source Management

Switch between different data stores

Monitor indexing status

Track synchronization

To Deploy in Production:

Backend Implementation (Python with Boto3):

pythonimport boto3

import json

bedrock = boto3.client('bedrock-agent-runtime')

def query\_knowledge\_base(query, kb\_id, data\_source):

response = bedrock.retrieve\_and\_generate(

input={'text': query},

retrieveAndGenerateConfiguration={

'type': 'KNOWLEDGE\_BASE',

'knowledgeBaseConfiguration': {

'knowledgeBaseId': kb\_id,

'modelArn': 'arn:aws:bedrock:...:model/anthropic.claude-3-sonnet'

}

}

)

return response

Database Schema (Aurora PostgreSQL):

Store documents with vector embeddings

Full-text search capabilities

Metadata for source tracking