

AI-Powered Policy/Billing Chat Assistant

Project Goal

Develop an AI Chat Assistant that allows internal staff or customer support agents to ask questions about policies, billing status, and common procedures and get accurate, context-rich answers instantly.

High-Level Requirements

Functional Requirements

- Chat-style interface for questions like:
 - "What is the status of Policy #12345?"
 - "When is the next billing date for Policy #98765?"
- Integrate internal databases and REST APIs for:
 - Policy status
 - Billing information
- Use Retrieval-Augmented Generation (RAG) for parsing questions and extracting relevant information from databases and documents.
- Provide plain language answers with source citations and next steps.

Non-Functional Requirements

- Role-based access control (only authorized staff can access data)
- Maintain data privacy and security standards
- Maintain quick response times (under 3 seconds)
- Deploy on internal servers or a secure cloud environment
- Support 100–200 concurrent internal users

Project Plan (60 Days)

- Week 1–2: Finalize requirements, identify data sources, set up dev environment, choose tech stack.
- Week 3–4: Develop backend services, integrate internal APIs, build RAG pipelines, create initial LLM chat interface.
- Week 5–6: Build frontend (chat interface), test end-to-end flow, refine prompts for accuracy.
- Week 7–8: Final testing and deployment, internal beta testing, add analytics and logging, security review, and handover.

Suggested Tech Stack

- LLM Provider: OpenAI GPT-4 / Azure OpenAI / Claude
- Database: PostgreSQL
- Vector Store: Pinecone / Weaviate / FAISS
- Framework: Python (FastAPI / Flask), React / Streamlit
- Authentication: Company SSO (OAuth2)

Deliverables

- Chat Assistant Web App
- Integration with Policy and Billing APIs
- User Authentication and Role-Based Access
- Documentation and Demo Video
- Admin Dashboard for Usage Stats

Resources Needed

- 2-3 Interns (Backend, Frontend, Data/LLM Focused)
- 1 Project Lead / Company Sponsor
- 1 QA Tester (Internal Staff)