RAG Project Planning

🟢 Level 1: Mini RAG Project (1–2 days)

Project Idea: *"Ask Questions About My Notes/PDF"*

- Take a small PDF (resume, research paper, course notes).

- Implement RAG so you can ask questions like:

    - "What's the summary of this PDF?"

    - "What is mentioned about project X in the resume?"

- Stack: LangChain + FAISS + OpenAI API (or free Llama 3 on HF).

✅ LinkedIn Post Idea:
 "Built my first RAG chatbot that answers questions from my own PDF using LangChain + FAISS. No more scrolling through 50 pages 🚀"

🟡 Level 2: Medium Project (1–2 weeks)

Project Idea: *"Company Policy Chatbot"*

- Collect public HR/leave/IT policy PDFs (or dummy docs).

- Build a chatbot where employees can ask:

    - "How many casual leaves do I get?"

    - "What is the WFH policy?"

- Add **UI with Streamlit/Gradio**.

- Deploy free on Hugging Face Spaces.

✅ LinkedIn Post Idea:
 "Tired of searching in PDFs? I built a chatbot that answers HR policy questions instantly. Uses Retrieval-Augmented Generation (RAG) with LangChain + FAISS + Streamlit."

🟠 Level 3: Advanced Project (Iteration)

Take your HR bot (or PDF bot) and **make it better** step by step:

1. Add **hybrid search (BM25 + embeddings)** for accuracy.

2. Add **source citations** ("Answer based on Page 12 of Policy.pdf").

3. Add **chat history memory** (multi-turn conversation).

4. Add **evaluation** (use LlamaIndex evals or RAGAS to test hallucination rate).

5. Deploy on **Docker + AWS/GCP/Render** for production feel.

✅ LinkedIn Post Idea (iteration):
 "Upgraded my RAG chatbot! Now it not only answers HR policy questions but also cites exact sources and handles follow-up queries. Deployed on the cloud 🚀"

🔴 Level 4: Portfolio-worthy Project (1–2 months)

Project Idea: *"RAG-Powered Knowledge Hub"*

- Upload multiple document types (PDFs, CSVs, websites, YouTube transcripts).

- User selects a data source → chatbot answers queries.

- Add **admin panel** to upload new documents (so knowledge updates dynamically).

- Use **Weaviate/Pinecone** for scalable retrieval.

- Experiment with **RAG 2 (per-token retrieval)** or **hybrid models**.

✅ LinkedIn Post Idea:
 "From a small PDF Q&A bot to a full-fledged RAG-powered Knowledge Hub — now supporting multiple file types, cloud deployment, and scalable vector DB. Learned tons about embeddings, retrieval, and hallucination handling along the way!"

🔑 Strategy for LinkedIn

- Post each milestone (don't wait for the "perfect" project).

- Show **screenshots/demos**.

- Write a short "what I learned" section each time.

- Tag relevant hashtags (#AI, #LangChain, #RAG, #GenerativeAI).

👉 So the flow for you could be:

1. **Start tiny** → PDF Q&A bot.

2. **Iterate** → HR/Policy chatbot with UI.

3. **Enhance** → Add citations, hybrid search, memory.

4. **Scale** → Knowledge Hub with multi-source + deployment.