

Project Brief: Search Engine Prototype for Internal Document Retrieval

Context

A client has reached out to you with a need: they want an efficient solution to search across their internal documentation (PDFs, Word files, meeting notes, procedures, emails, etc.).

Their main concern is enabling employees to quickly find relevant information, even when their search queries are vague, approximate, or context-dependent. They are considering AI-based approaches but have not yet committed to a specific provider or solution.

Your Mission

Your goal is to deliver a **compelling proposal or prototype** that convinces the client to work with you. This can be:

- A **demonstration on synthetic or public data**, or
- A **detailed design plan** outlining architecture, development phases, estimated cost, and technical stack.

This should take **between 3 hours and 2 days** of work.

Expected Deliverables *(choose one or combine several)*

1. **Interactive Demo or Mini-Prototype** : web interface or via terminal
2. **System Design & Architecture Proposal**
 - a. Technology choices (e.g., vector database, orchestrator, document parser, LLM provider)
 - b. Core modules (indexing, search interface, permission management, monitoring)
 - c. Scalability, integration with existing infrastructure, and security considerations

3. Project Plan & Business Discussion

- a. Key **questions to ask the client** that could significantly impact your recommendations (e.g., volume of data, document formats, language, update frequency, sensitivity of content, integration constraints...)
- b. Prioritized development roadmap (e.g., MVP, future phases)
- c. Cost estimation: initial build, hosting/infrastructure, and maintenance

Constraints & Focus

- The client hasn't committed to any partner yet: **your objective is to gain their trust.**
- You should balance **technical feasibility**, **business value**, and **clarity of vision.**
- The output must be clear enough to be understood by someone who is not deeply technical.
- Bonus if your work includes diagrams, UI mockups, or real examples.

Guidance

You are encouraged to:

- Show creativity and realism in your approach.
- Focus on exploring existing solutions on the market to identify the most relevant technologies and provide well-justified alternatives.
- Include a short section with **questions you would ask the client** if any aspect of the context is unclear and could lead to different technical or business decisions.