Final statement of AI Use
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The proposed system is based on the client's needs and requirements, my prior experiences, and my general knowledge gained from literature and industry practices in the fields of information retrieval, Retrieval-Augmented Generation (RAG), and chatbot systems. While I cannot cite any particular sources (since I did not rely on any specific papers necessarily), I want to emphasize that many statements made throughout this document and project proposal are derived from my experiences—built upon prior explorations, research, and familiarity with the literature, foundational principles, and technologies used in the domain mentioned above. Therefore, there might be sufficient similarity between the claims I made throughout this paper and statements found in the literature. Again, this is not because I plagiarized, but because I acquired knowledge through a series of literature reviews, classes, and projects in the past. However, I did not necessarily keep track of which knowledge came from where. Since nowhere in this class (unless I misinterpreted the requirements) were we explicitly asked to conduct a formal literature review as the basis for our justification of the product or techniques selected, I did not put extra effort into finding formal peer-reviewed sources to support my claims. If you have any follow-up questions or need clarification, I would be more than happy to provide them.

Use of AI Tools

ChatGPT was used for research during the project proposal stage, which is also referenced here. It was consulted to finalize decisions regarding the system architecture and RAG pipeline. ChatGPT-4o Pro and the deep search function were extensively used in the Novelty section, as well as for market analysis, literature searches, and acquiring external sources and prior industry use cases of human-design tools. ChatGPT-4o Pro, with its deep search features, served as the primary tool for generating and summarizing content in the Novelty section. All of the output was carefully reviewed, reframed, corrected, restructured, and finalized as needed, and I take full responsibility for the final version used in the project materials.

ChatGPT-4o Pro and ChatGPT-3.5-mini-high were heavily used to brainstorm, reframe, optimize, clarify, expand, describe, and finalize the architectures, data, and RAG pipeline. All of the initial ideas were my original work, resulting from client discussions; however, the models mentioned above were heavily used to put those ideas into a detailed, clean, and structured format, refine technical details and techniques chosen, and analyze their benefits, strengths, and weaknesses—including how those weaknesses could be mitigated. Additionally, ChatGPT served as a discussion partner and consultant, helping me analyze and map my prior experiences with RAG (including my summer internship and independent projects). It was instrumental in brainstorming which methodologies I had previously applied should be used in this case, which ones should be reconsidered, and, once I finalized the ideas, helping to polish and articulate them in the best way possible.

ChatGPT was also extensively used to assist with formatting, aggregating information across various files and documents, consolidating decisions that had been made, and refining the project proposal and midterm presentation. ChatGPT-4o, 4.5 Preview, and ChatGPT-4o Pro were used as tools to correct grammar and spelling, format text, and rewrite it in a more concise (or, where required, expanded) and polished way, ensuring it remained professional and easy to follow.

Use of AI in Coding

ChatGPT-3.5-mini-high, ChatGPT-4o Pro, Claude 3.7 Sonnet, and Claude 3.5 Sonnet were extensively used to design the structure and flow of the coding documents. These tools were used to refactor, rewrite, optimize, add features, expand, and improve the code. At different stages, they assisted in examining pseudo-code, deciding on the appropriate structure for API calls (especially for the consultation methods), rewriting pseudo-code into Python (or vice versa), fixing syntax and indentation errors, and combining different pieces of code into comprehensive, solid blocks.

Claude 3.7 Sonnet specifically contributed significantly to the creation of the knowledge graph feature and the design, stylistic decisions, and implementation of the website. It also played a major role in setting up website hosting and debugging errors that arose during multiple hosting attempts. In essence, it functioned as a personal TA for about three hours—clarifying my confusion, walking me through unbiased steps, and assisting with extensive debugging.

ChatGPT also played a role in debugging, brainstorming, structuring syntax, and outlining pseudo-code for data processing flows. Finally, both ChatGPT-3.5-mini-high and Claude 3.7 Sonnet were utilized to help finalize, expand, implement, and refine unit tests. These models were also used to make unit tests more robust and complex when needed, improve test coverage, and ensure a more comprehensive visualization of test results.

AI for Writing Assistance

As briefly mentioned previously, ChatGPT was directly utilized for structuring text, grammar, formatting, and spell-checking. This is largely due to my dyslexia, which makes writing, spelling, and formatting particularly challenging for me. ChatGPT helped ensure clarity and correctness in my written work.

Summary

To summarize everything stated above: the ideas, architecture, data pipeline, testing methodologies, requirements, and specifications used in this project remain my original work. As mentioned earlier, the project is largely based on my past experiences and knowledge, as well as discussions with the client and consultations with research literature. However, ChatGPT and Claude tools were used as supplementary tools and assistants in various aspects of the project, including research, formatting, re-structuring, coding, debugging, testing, documentation, and deployment of the final tool.