Report on Use of Large Language Models (LLMs)

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(a) List the LLMs or LLMs that you used for this project.

I used ChatGPT and Perplexity.ai as the LLMs for this project.

(b) Did you use an LLM for refining the specification document, the project code, or both?

I used LLMs for both the project code and the specification document.

Project Code:
Initially, I wrote a general Ruby implementation that covered all the required instructions. I then used LLMs to identify missing error-handling cases, improve the organization and readability of the code, and refine the logic to better align with the problem requirements.

Specification Document:
I utilized LLMs to help articulate the *Limitations* and *Future Enhancements* of my code, and to generate example inputs and outputs (both valid and invalid). This helped me make the document more complete and professionally structured.

(c) What kind of prompting did you use for LLM? (E.g., one of zero-shot prompting, few-shot prompting, or chain of thought prompting).

I primarily used few-shot prompting, where I provided examples of my existing code or document sections and asked the model to refine or extend them. In some cases, I also used iterative prompting, refining the same response multiple times based on feedback from earlier outputs, until the final version met the project requirements.

(d) Rank on a Likert scale the results returned by each LLM that you used (5–LLM produced exact results; 4–Minor corrections applied to LLM results; 3–Major corrections applied; 2–Most LLM output was unhelpful; 1–LLM output did not help at all.)

Perplexity.ai – 3/5
It was helpful in identifying optimizations and pointing out missing elements in my code. However, when I requested a fully revised version that incorporated all corrections, the results were inconsistent and somewhat disorganized.

ChatGPT – 4/5
It produced clearer, more structured, and more accurate outputs. Although some initial responses required adjustments, the results improved significantly with iterative refinement. For the specification document, ChatGPT provided concise and relevant content with minimal prompting.