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Original Report Summary

This research proposal seeks to leverage Large Language Models (LLMs) like GPT-3.5 and GPT-4 to predict the future trajectory of vessels based on Automatic Identification System (AIS) data. The researcher aims to feed the first half of a vessel trip into the system, then have the model predict the rest of the journey, reducing the time required to build systems from scratch. If successful, this approach could be beneficial for researchers, the wider machine learning community, and organizations like the US Coast Guard and US Navy that monitor vessel traffic.

I evaluated research proposal based on the following criteria:

- **Clarity of Proposal**: I looked for a clear and concise explanation of your proposed research, its significance, and how you plan to conduct it.
- **Feasibility**: I assessed if the research can realistically be conducted within your proposed time (11 weeks) constraints.
- **Relevance**: I examined the relevance and significance of the research to the field, along with potential implications.
- **Methodology**: I checked if the proposed methods are scientifically sound, appropriate for your research question, and clearly explained.
- **Potential Impact**: I evaluated how well your proposal explains who would benefit from the research and how.

Here are my feedback and suggestions:

Strong Points:

- Clarity of Proposal: Your proposal is well-written and organized, and the inclusion of figures contributes significantly to understanding the project. The figures provide a visual aid that simplifies complex topics and enhances readability. You've clearly stated the project goals, current limitations, proposed improvements, and potential benefits.
- Relevance: You've adequately explained the relevance of your research. If successful, your project could significantly enhance vessel trajectory prediction and broaden our understanding of the potential uses of large language models.
- Potential Impact: You've clearly identified the potential impacts of your research, which include benefits not only for researchers and the wider machine learning community, but also practical applications for the US Coast Guard, US Navy, and other law enforcement agencies.

Areas for Improvement:

- Methodology: While the general approach is outlined, the **specific steps, techniques, and tools** need to be more clearly described. More information about **how the models will be trained, what data will be used, and how results will be evaluated** is needed to provide a comprehensive understanding. Furthermore, when describing expected results for the midterm, be sure to clarify terms such as "poor performance." Defining what you consider as poor performance in this context will help in setting clear, measurable goals and benchmarks for your project.

- Feasibility: Although the feasibility of your proposal is mostly evident, **providing a more detailed elaboration on potential roadblocks** would make it even stronger. Given the complexity of the project, it would be beneficial to reconsider if the proposed 11-week timeline is realistic.

In summary, your proposal is well-constructed and introduces a novel idea, offering potential benefits to various stakeholders. However, a more detailed methodology and a realistic assessment of potential challenges and timelines would further improve it.

I trust this feedback will be useful for your research journey, and I look forward to seeing how your project progresses.