

Questionnaire: Guide for assessing research involving artificial intelligence, machine learning, large language model technology (“AI”)

Researchers are asked to respond to the following questions in completing their application for ethics review. HRECs or other ethics review bodies will then consider the information provided in assessing the research proposal.

Instructions for researchers

- *In providing your responses, consider each stage of the research in which you intend to use AI and each tool that you intend to use.*
- *Where applicable, include references to the relevant project document/s (with page numbers) that include more complete information that is relevant to your response to the question.*

Is AI used for non-routine purposes in the research project?

- ☐ no, further responses required
- ☒ yes, continue

1. Identify AI use stage (check all that apply)

Discovery (concept generation and design)

Literature review

Planning and development

Ethics and/or scientific review

Recruitment

Intervention (if relevant)

Data collection

Data management

Data analysis

Publication

2. How will the AI tool be used at each relevant stage of the research project?

3. Will participant data be entered into any AI system operated by a third party?⁴

no (*continue to next question 4*)

yes

If yes describe:

- a. if the data will be retained by the AI system
- b. if there are any restrictions, licensing conditions, or ethical considerations in the tool's creation that may affect participants' rights or data privacy
- c. whether the data will be used to further train the same model or other models
- d. how you will ensure that the data will not be disclosed, exchanged or sold by the third party without participant consent.

4. What is known about the provenance of the AI tool's training data?

- a. Do the data sets that are used to train the AI algorithms adequately represent the population/s impacted by or relevant to the research?

yes

no

- b. If not, justify why it is appropriate for this tool to be used on your research cohort.

⁴ Note that submission to and retention of human data to a third party (e.g. OpenAI via ChatGPT, Microsoft via Copilot, Google via Gemini, etc.) where data are very unlikely to remain in Australia may constitute a cross-border disclosure under the Privacy Act 1988. If this is the case, researchers would incur a burden under the Act to ensure sufficient information is given to people from whom data have been collected and that consent exists for such use and disclosure. Use of local AI running on researchers' hardware or mechanisms such as Google NotebookLM may mitigate these concerns.

5. What are the characteristics of the AI tool that you intend to use?

- a. Has the AI system been validated for its intended use/s? If so, how? If not, why not?
- b. Is the AI tool non-adaptive or adaptive (involving continuous learning algorithms while the researcher is using the tool)?
- c. If the AI tool is adaptive, what are the limits to permitted adaptations, if any?
- d. Is reproducibility and/or replicability important for your AI tool? If so, explain why and how this has been adequately addressed.
- e. Will the AI interact with research participants and/or research staff? If so, how?

6. Describe your plan for oversight of the AI and the outputs of the tools or systems used.

- a. What safeguards are in place to include human oversight, especially when critical decisions are necessary or unexpected developments arise?
- b. How will you know if the tool has produced biased or unfair outputs? What steps will you take to detect and address the risk of this occurring?
- c. Who on the research team has the skills to critically assess the outputs of the AI tools/ systems and how will these team members review these outputs before they can have an impact on participants or others?
- d. Does your plan include the capacity to monitor and assess the performance of the AI over time? Explain how this will be done.
- e. If relevant, will training be offered to members of the research team or organisational staff who interact with the AI during the research?

- 7. Describe the risks associated with your use of the AI tool in your research and your plan for mitigation and management of those risks.**
- What are the potential harms that could result from the use of the AI tool and to whom?
 - How likely are these harms?
 - How will these risks be mitigated and managed, and their successful mitigation and management be evaluated?
 - Will risk assessment be conducted on an ongoing basis during (and potentially after) the project? If so, will it be conducted in accordance with a defined schedule? If so, what is the proposed schedule?
- 8. What information about the use of AI in the research and the projected impact of any AI-assisted or AI-generated outputs of the research will be made available to participants, and the public (if relevant) and how will it be communicated?**