Al and the Writer: How Language Models Support Creative Writers

Research Questions

How can interactive language model systems support writers in creative writing tasks? What modulates creative writers' response to using such systems in their work?

Keywords: writing support tools; natural language generation; creativity; cognitive modeling

Thesis Statement

Interactive systems that use language models can support writers in creative writing tasks by providing *inspiration*, *translation*, and *perspective*; furthermore, the social dynamics of *trust*, *understanding*, and *access* modulate writers' response to such systems.

Contributions

- 1. A design space based on the cognitive process model of writing that characterizes systems that support creative writers.
- 2. Two systems that support creative writers and studies demonstrating how they contribute to the writing process.
 - a. Metaphoria, a system for generating metaphorical connections between two concepts, and a study of this system demonstrating:
 - i. it is coherent to context and produces divergent outcomes for writers, and
 - ii. three ways professional poets make use of the system: to elicit ideas (inspiration), to overcome writer's block (translation), and to act as a new form (structural).
 - b. Sparks, a system for generating sentences about a technical topic in order to aid in technical explanations, and a study of this system demonstrating:
 - i. three use cases of language model outputs—*inspiration*, *translation*, and *perspective*—that correlate with distinct interaction patterns, and
 - ii. that users prefer higher quality outputs within the outputs they see, but the overall quality of outputs seen does not correlate with perceived usefulness.
- 3. A qualitative study investigating creative writers' attitudes and behaviors with respect to human-like writing tools powered by language models, finding that the social dynamics that influence when and how they seek help from peers also influence their attitudes towards language model support. [in progress]

Timeline

Aug 15 Complete interview study
Oct 15 Complete dissertation draft

Nov 15 Defend 🎉