Scholarship Learning Community (SLC)

Title: Agentic Computing Across Disciplines: Transforming Research and Creative Practice

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Description:

The goal of this Scholarship Learning Community (SLC) is to bring together an interdisciplinary group of scholars to explore focused research questions on agentic AI systems – software systems that can plan, act, and collaborate using large language models – and how these systems can transform research and creative practice across domains. More specifically, this SLC seeks to build capacity within DePaul for interdisciplinary work on agentic systems, leading to further cross-college and cross-program collaboration on research projects, creative practice, applied prototypes, and grant proposals.

The SLC will organize a series of focused discussions and presentations on specific themes. Examples of specific themes are described below; the specific themes selected will depend on the research interests and expertise of group participants.

1. **Agentic systems in research workflows.** This theme will explore how agents can support literature synthesis, data analysis, software development, and reproducibility. It will include the assessment of provenance, citation, and verification practices that allow agentic outputs to be incorporated into rigorous research with appropriate disclosure. Discussion will engage both successes and well-documented failure modes such as hallucination, brittle tool use, and over-reliance, and the methodological habits needed to mitigate them.

2. **Creative practice and the humanities.** Agentic systems are increasingly used in writing, design, and humanistic interpretation. This theme will examine how scholars and practitioners critically engage with agents as collaborators, including questions of voice, attribution, and the value of artefacts produced through agentic work.

3. **Agentic systems in teaching, learning, and assessment.** This theme will explore what changes when students and instructors have access to capable agents – for instance, assignment design, formative feedback, and academic-integrity policy. The theme will also examine emerging guidance from disciplinary societies and accreditors, and what counts as defensible practice given rapidly shifting capability.

4. **Reliability, evaluation, and governance.** People's trust in agentic systems depends on their ability to understand and verify what an agent has done. This theme will explore evaluation frameworks, audit trails, and the kinds of evidence that support claims about an agent's behavior. It will also engage with authorship norms, IRB and consent considerations, and emerging institutional and journal policy.

Other themes that may be explored include:

- Agentic systems in the sciences and the professions (e.g. nursing, law, business, education).
- Multi-agent architectures and orchestration frameworks.
- Cost, sustainability, and the political economy of agentic infrastructure.
- Implications for research ethics and scholarly publishing.

Activities and Desired Deliverables:

Activities of this learning community will include 1.5 hour meetings in a seminar format during the months of September, October, November, January, February, March, April, May, and June, held in the Agentic Computing Lab at CDM. In each meeting there will be two to three presentations on pre-selected themes by volunteer participants. Each presenter will provide a list of questions for further exploration and a set of scholarly and applied resources for those interested in more detail. Each session will also include Q&A and discussion. Presenters will have the opportunity to select a specific research problem related to one of the themes above or to propose research questions broadly dealing with agentic computing across disciplines.

The desired deliverables of this SLC will include the following:

1. Recordings of presentations, archived where appropriate on the Agentic Computing Lab and/or DePaul AI Institute web sites.

2. A plan to develop one or more focused interdisciplinary working groups around specific research problems that emerge from SLC discussions, including potential collaborations on external funding opportunities.

3. Focused descriptions of several specific tasks, with curated resource lists, that can support other DePaul faculty interested in agentic computing across disciplines.

4. A culminating event open to the DePaul community to share findings and demonstrations from the SLC.