MATHEMATICS DEPARTMENT SEMINAR

Al as a Thinking Partner in Statistics: Results from Spring & Fall 2025



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Abstract

This talk shares classroom evidence on using large language models as tutor-like "thinking partners" in undergraduate statistics. In Spring 2025 I integrated course-aligned assistants into MATH 2200 and MATH 4200 using a structured interaction scaffold called SMARTS (State, Map, Ask, Reason, Think, Summarize). The assistants were constrained to syllabus materials, prioritized hints over answers, and, for R work. I will present findings from three student surveys on usability, learning support, and study habits. I will also report early Fall 2025 findings from a two-section MATH 3200 design. One section followed traditional methods. The other replaced static lecture notes with custom GPTs and guided prompt frames, emphasizing process-based evaluation and visible reasoning. I will share the findings and describe how I implemented the Al section.