Thesis Defense

Computer Science Master's Program

"AI Interview Helper: A Tool for Assisting Search and Rescue Long-Profile Interviews"

By **Dylan Starink**

Abstract:

In search and rescue (SAR) operations, time pressure and limited interviewer experience can lead to missed opportunities when interviewing a missing person's friends and family. This thesis presents a real-time, end-to-end system that provides context-aware follow-up question suggestions as interviews unfold. Leveraging large language models (LLMs) and agentic design patterns, the system supports interviewers in eliciting more complete and relevant information.

The system was evaluated through three mock interviews with two SAR participants across two events. Given the limited sample size, the results provide early insights into the feasibility of AI-assisted interviews. Qualitative feedback indicated that the generated questions were consistently relevant and often surfaced lines of inquiry that interviewers had not previously considered, helping to deepen exploration of key topics. Quantitative results suggest strong usability, with System Usability Scale (SUS) scores improving from 77.5 to 95 across iterations and participants reporting a high likelihood of recommending the system (9/10 to 10/10).

Overall, this work demonstrates the feasibility and potential value of real-time LLM-assisted interviewing tools in SAR contexts, with the potential to accelerate clue discovery, improve interview completeness, and reduce the risk of critical information being overlooked in time-sensitive missions, while motivating larger-scale validation in operational settings.

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Time: 9:30-11:30am
Location: 14-232a
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