

GAURAANG MALIK

Project Manager, AI agents, Data mining, Qualitative Research

INTRODUCTION

My name is Gauraang malik and I come from the epicentre of global data generation, India. Since childhood I have been captivated by the world of formula one racing unable to drive at that age, I channelized my passion into cycling and video games. The virtual world of video games sparked my interest at such an extent that I developed an award-winning platformer game at the age of 16. While the virtual world of video games was quite immersive, Cycling kept me real and rooted. Being a formula one enthusiast for as long as I remember. I always acknowledge the connection between data and problem solving, it was only after my bachelor's degree and after I gained professional experience that I realized that there was much more depth to data than what I had perceived. This insight led me to move to Montreal to pursue Information Studies at McGill University, where I could further deepen my understanding of the field.

PROFESSIONAL EXPERIENCE

I have acquired experience in various roles at SAGO and Progresso Research. At Progresso, I was responsible for 30+ quantitative projects sample collection projects per month, I was responsible for overseeing quotas and inference rates, making decisions on adding new vendors and selecting sample collection tools to optimize the process. While serving as a Project Manager at this startup market research firm, I also took on the role of Bidding Manager, collaborating on RFQs to support the company's growth, given the limited number of employees.

I then moved to SAGO, where I was promised a broader role and gained exposure to a wider range of responsibilities. At SAGO, I managed 6-8 projects at a time, handling multiple aspects of quantitative research. My duties included collaborating with clients to understand their research objectives, assisting with survey design and translations for multi-country projects, overseeing survey programming and testing, managing sample quotas and inference rates, and providing tabulations. I have successfully managed B2B, B2C, and healthcare studies for clients like IPSOS, EMI, and Kantar.

RESEARCH EXPERIENCE

At McGill University, I am pursuing coursework in Artificial Intelligence, Data Science, Data Mining, Information Organization, Information Architecture, Research Principles and Analysis, and Information Security to refine and expand my skill set.

During the summer, I undertook a research project focusing on AI hallucinations, where I studied encoder and decoder transformer models. I explored the sources, types, and causes of AI hallucinations and investigated mitigation strategies, particularly through the use of AI agents and Retrieval-Augmented Generation (RAG) systems. This research contributed to the development of a new LLM-Agent architecture that uses research triangulation principles to address fact-conflict hallucinations. The integration of AI agents with features like profiles, memory, planning, and action capabilities along with RAG systems played a key role in these findings.

Currently, I am engaged in a winter research project that builds on these findings by integrating them into an existing open-source AI agent framework. So far, I have explored ReAct, SmolAgents, LangChain, Gentopia, and Microsoft AutoGen and plan to analyze additional agents before finalizing the framework for implementation.