

Introduction to the Minitrack on Generative Artificial Intelligence and Consumer-facing Technologies

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In this minitrack, we present and discuss research exploring intersections amongst generative artificial intelligence (GenAI) and consumer-facing technological goods and services, such as augmented reality equipment, wearable devices, e-textiles, smart home products, biometric authenticators, virtual environments, mobile applications, and other facets of the data-driven economy in which consumers are immersed.

When consumer goods and services are intertwined with the Internet of Things (IoT), with virtual places (the metaverse), and even with people themselves (the human-machine merger), the result is an ever-expanding array of networked data streams. For consumers, the evolution of immersive equipment augmenting physical reality and embedded devices enhancing human capacity marks a sea change from earlier wearable technology like fitness monitors and smart watches. What happens, however, when GenAI—previously trained only on textual or imagery data—gets hold of these data? And what potential exists for GenAI to itself manipulate connections between humans and machines or even create entirely new realities in the virtual and physical worlds?

Rustam Vahidov and Real Carbonneau will present their work titled Customer – Software Agent Negotiations Using Large Language Model: An Experimental Study.

Abstract:

Large Language Models (LLMs) present remarkable opportunities for researchers and professionals to improve the effectiveness of software agents acting on companies' behalf. A particularly promising application is using LLMs to negotiate deals with potential customers. This paper proposes integrating negotiation models with LLM capabilities to generate textual offers in machine-human negotiations. It builds on an assumption that LLMs demonstrate emotional intelligence in their interactions with humans, positively influencing negotiation outcomes and human perceptions. The work introduces a prototype agent application based on a phone plan sales scenario. An experiment with human participants tested the performance of the LLM-powered negotiation agent against a version without LLM. The results indicate that the LLM-enhanced software agent reached agreements with better prices.