

HUMAINE 2020 Call for Participation

HUMAINE (HUMAN Multi-Agent Immersive NEgotiation) is a new [ANAC \(Automated Negotiating Agents Competition\)](#) league that will premiere at the [International Joint Conference on Artificial Intelligence](#) in Yokohama in July 2020.

In this competition, two competing agents negotiate with a human buyer who wishes to purchase various ingredients from which cakes and pancakes can be made. The agents are rendered as avatars on a display, and the human interacts with them by speaking (in English) and looking at the one with whom they wish to negotiate. The negotiation platform uses a Speech-to-Text service to render the audio into text and a head-pose estimation system to infer the addressee, and passes that information to each agent. Each agent must interpret the utterance, determine an appropriate negotiation act (such as a counteroffer, acceptance, or rejection) in light of the utterance and any other relevant context, and determine how best to render that act into an utterance and an accompanying gesture. Upon receiving this message from the agent and checking it for compliance with competition rules, the system causes the avatar to behave and speak as specified. The winning agent is the one that best maximizes its utility across multiple rounds of negotiation with various humans and other agents.

[Example interaction video.](#)

You can find more information about our framework by following the link:

- <https://cisl.rpi.edu/humaine2020>

Determining the winner

The competition winner is determined by accumulating each agent's utility across a set of 10-minute rounds during which it interacts with different humans and other competing agents. An agent's utility is the difference between the price for which it sells ingredients and those ingredients' production cost (which is generated randomly for each round). Human buyers have a utility function that is based upon the number of cakes and pancakes they can make given the ingredients they have purchased, and they are rewarded according to their ability to maximize their utility during the competition. Humans are thus incentivized to drive as hard a bargain as possible, without running the risk of failing to reach an agreement with at least one agent.

Although the agent winner is determined by accumulated utility, the fact that the contest involves humans suggests that the most effective agents will be those that combine algorithmic prowess with social skills (e.g.. being fun, pleasant, or subtly manipulative).

Winning agents will receive cash prizes, and winning humans will have their names announced at the conference. A prize will also be awarded to an agent that is judged to be most socially adept or engaging (regardless of its accumulated utility).

Registration

If you are interested in participating in the HUMAINE 2020 competition, [register here](https://docs.google.com/forms/d/e/1FAIpQLSevOi1b7TqJXqDKIWGCAuoQ0O-DHPHNrtlt3ltUXL0QXVCIQ/viewform) by Sunday, March 1st, 2020. As the time for the competition approaches, you will be given various tools and opportunities for testing your agents. Further information about timeline and technical details will be provided in the near future.

Link:

<https://docs.google.com/forms/d/e/1FAIpQLSevOi1b7TqJXqDKIWGCAuoQ0O-DHPHNrtlt3ltUXL0QXVCIQ/viewform>

Organizers

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