SAMI: Enhancing Social Presence in Online Classrooms

What is it

SAMI (Social Agent Mediated Interactions) is a social AI actor developed by AI-ALOE and Design Intelligence Lab at the Georgia Institute of Technology.

What does it do

SAMI enhances students' social presence in online classrooms by encouraging students to connect with peers based on shared identity.

What are its goals

- Increase students' sense of *belongingness* in the class
- Mitigate social isolation and emotional distress t
- Promote social construction of knowledge and hence, improve learning outcomes
- Improve retention

Online classroom - you are on own!

In-person classroom - help is a seat away!

Social isolation is common in online classrooms.

AI-ALOE

dilab

Visit our websites

https://dilab.gatech.edu
https://aialoe.org/

Contact us

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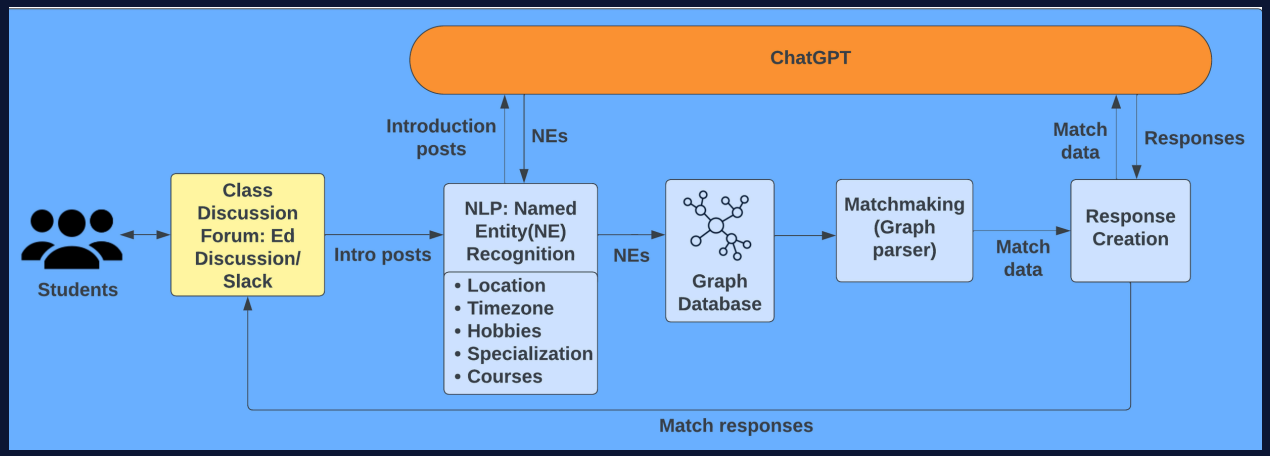
How does it work

- Students post self-introductions in the class discussion forum (e.g., Ed Discussion) or in Slack channel.
- SAMI uses ChatGPT for named-entity-recognition (NER) to extract students' locations, hobbies, and academic interests.
- Extracted entities are used to build a knowledge graph for the class. This graphs has two types of nodes - student IDs and their related entities.
- SAMI parses knowledge graph to suggest potential matches to students based on shared identity. Students are a match if they are connected to one or more same entity nodes.
- SAMI posts ChatGPT-crafted match response for each student. The response provides html links for a student to reach out to five peers.

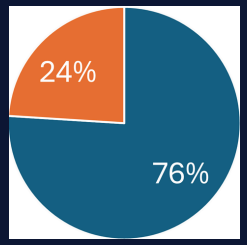
SAMI Architecture



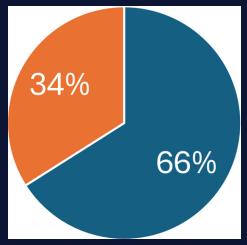
Deployments

- SAMI has been deployed in several classes across Georgia Institute of Technology.
- Over 11000 students have had access to SAMI.

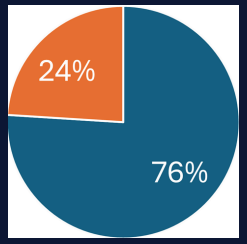
SAMI Efficacy: Survey Results from Intro to Cog Sci class



76% of students reached out to matches suggested by SAMI.



66% responded to students who reached out following SAMi's suggestions.



20% formed project teams using SAMI' match suggestions; 60% used both SAMI and in-person connections.

SAMI Efficacy: Click-through data from HCI class

# students	# self introductions	# student opt-ins	# match name clicks	# click to-say-hi clicks
691	532	249	161	87

Sample student feedback - "I think the personalized response fosters inclusion and collaboration in the class. It helped me have a sense of belonging."

Further reading

Kakar, S. et al. (2024). SAMI: An AI Actor for Fostering Social Interactions in Online Classrooms. In: Sifaleras, A., Lin, F. (eds) Generative Intelligence and Intelligent Tutoring Systems. ITS 2024. Lecture Notes in Computer Science, vol 14798. Springer, Cham. https://doi.org/10.1007/978-3-031-63028-6_12