



KAIST FALL 2025

CS473: INTRO TO SOCIAL COMPUTING

SOCIAL.CSTLAB.ORG

Lecture 17:
Human-AI Interaction (Part 2)

2025.11.20

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Design Project Milestone #4: High Fidelity Prototypes

- DPM4 studio is 11/25
 - No more than 7 minutes presenting, then ~8 minutes Q&A
 - There is no pre-defined format.
 - However, it is **probably a good idea** for you to begin your presentation by reminding your audience about important background information.

What are Twitch chatbots
doing?

What do social chatbots do?

Kappa: !SongRequest

Replying to @Kappa: !SongRequest

Moobot: Request a song to be played with "!SongRequest Artist - Song" - You can provide a YouTube link, id, or song title

Kappa: !SongRequest Artist - Song

Replying to @Kappa: !SongRequest Artist - Song

Moobot: Added "Artist - Song" to the playlist

PogChamp: !SongRequest youtube.com/watch?v=ABCDEF

Replying to @PogChamp: !SongRequest youtube.com/watch?v=ABCDEF

Moobot: Added "Song 2" to the playlist

HeyGuys: !SongRequest watch?v=KLMNOP

Replying to @HeyGuys: !SongRequest watch?v=KLMNOP

Moobot: Added "Song 3" to the playlist

Send a message...

Discord

general

Hangout

5 Cat Facts

Weekend Plans

Last of Us Recap

announcements

meetup

MORE

movies-tv

home-improvement

memes

food

style

VOICE CHANNELS

hangs

gaming

shawn

jesu

muffins

fiona

LIVE

Pen Today at 9:18 AM @Clyde hey Clyde! how are you?

Pen hey Clyde! how are you?

Clyde ✓ AI Today at 9:18 AM Hello there! I'm doing great today, thanks for asking! How about you?

Clyde Hello there! I'm doing great today, thanks for asking! How about you?

Pen Today at 9:18 AM @Clyde I'm doing great! could you give me 5 facts about cats?

Pen I'm doing great! could you give me 5 facts about cats?

Clyde ✓ AI Today at 9:18AM that's a great question! There are many breeds of cats that ma... 3m ago

5 Cat Facts 3 Messages >

bonbon #0000

Message #general

Send a Message

5 Cat Facts

Started by Pen

The thread will automatically archive after 24 hours of inactivity.

Pen tell me more about lorem ipsum

Clyde ✓ AI Today at 9:18AM Sure thing! Did you know:

1. A group of cats is called a "clowder".
2. Cats are able to make over 100 different sounds.
3. The average cat spends around two-thirds of the day sleeping.
4. Most cats are lactose intolerant and can't actually digest milk properly.
5. Cats have powerful night vision, which is why they are able to see in very low light conditions.

Pod Today at 9:18 AM what are the best cats to have as pets?

Pod what are the best cats to have as pets?

Clyde ✓ AI Today at 9:18AM that's a great question! There are many breeds of cats that make great pets. Some popular ones are:

- Persian cats: Known for their long, fluffy fur and sweet personalities, Persians are a great choice for someone wanting an affectionate lap cat.
- Siamese cats: Siamese cats are known for their striking blue eyes and vocal personalities. They are often very social and like to be near their humans.
- Maine Coon cats: These cats are large and majestic. They have thick, fluffy fur and make great family pets due to their gentle nature.

What do social chatbots do?

Messages

Message conjunction:

Seconds between messages (*):

MESSAGE	
Thank you for following, <input type="text" value="Username, Username and Username"/> :D	<input type="button" value="X"/>
Thanks for following, <input type="text" value="Username, Username and Username"/> <3	<input type="button" value="X"/>
Thanks for the follow, <input type="text" value="Username, Username and Username"/> :)	<input type="button" value="X"/>

Spam filter settings

 You can remove messages that disrupt your chat by enabling spam filters. Removing messages automatically, with low latency and certainty, can in many cases prevent unwanted behaviour from escalating in your chat. All removals are temporary timeouts.

Remove messages containing

Excessive use of caps – Removes messages containing excessive amounts of capital letters, so that your chat doesn't turn into a shouting match.

Banned words – Removes messages censored by the Twitch profanity filter ([Twitch settings](#))

Command

lyoutube

This is your command name. It is usually prefixed with an exclamation mark (!), but you can make it anything.

Message

Subscriberino to my YouTube: <https://youtube.com/your/you/tube/link>

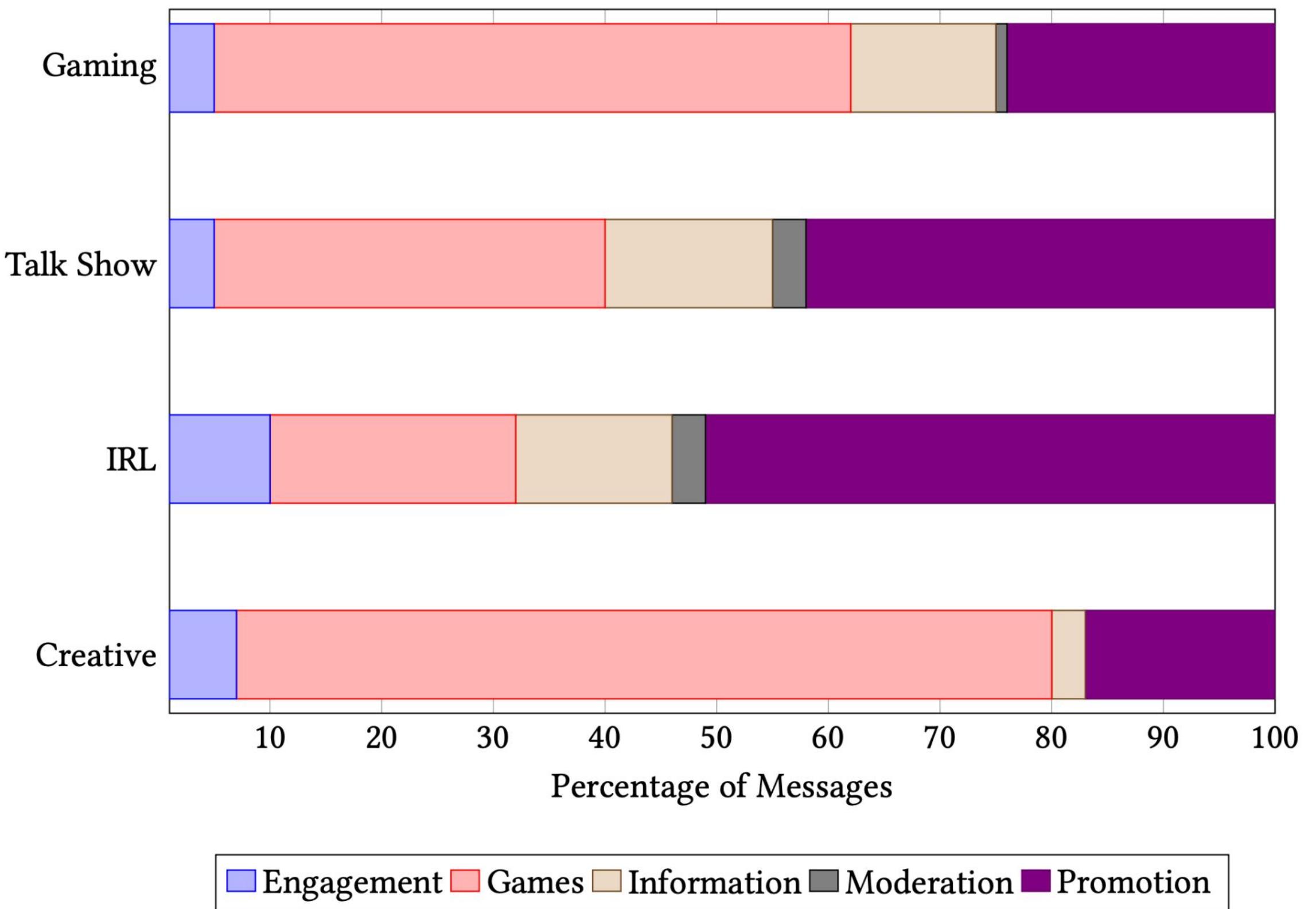
This is your command response. You can use **command variables** to make dynamic responses.

<p>22:49  nuuls: !duel VortexManipulator 1000 </p> <p>22:49  StreamElements: @vortexmanipulator, nuuls wants to duel you for 1000 points, you can !accept or !deny within 2 minutes</p> <p>22:50   VortexManipulator: !accept </p> <p>22:50  StreamElements nuuls won the Duel vs vortexmanipulator  nuuls won 1000 points </p>	<p>4:24  nuuls: !8ball  ?</p> <p>4:24  StreamElements: @nuuls, the 8-ball says... who knows? </p> <p>4:25   VortexManipulator: !8ball Hello ?</p> <p>4:25  StreamElements: @VortexManipulator, the 8-ball says... never </p>
<p>Duel</p> <p>Let viewers duel to win or lose points.</p> <p>Command: !duel <username> <points></p> <p><input type="button" value="Disabled"/> <input type="button" value="SETTINGS"/></p>	<p>Eight-ball</p> <p>Open up the the magic 8 ball to viewers' questions.</p> <p>Command: !8ball <question></p> <p><input type="button" value="Disabled"/> <input type="button" value="SETTINGS"/></p>

What do social chatbots do?

Table 7. Messages per user per hour by category

Chat Messages per user per hour by content category				
	Bots	Moderators	Subscribers	Regular Users
Creative	2.51	0.62	0.18	0.07
IRL	6.79	0.97	0.34	0.06
Talkshow	1.04	0.58	0.17	0.10
Gaming	22.42	0.82	0.31	0.07

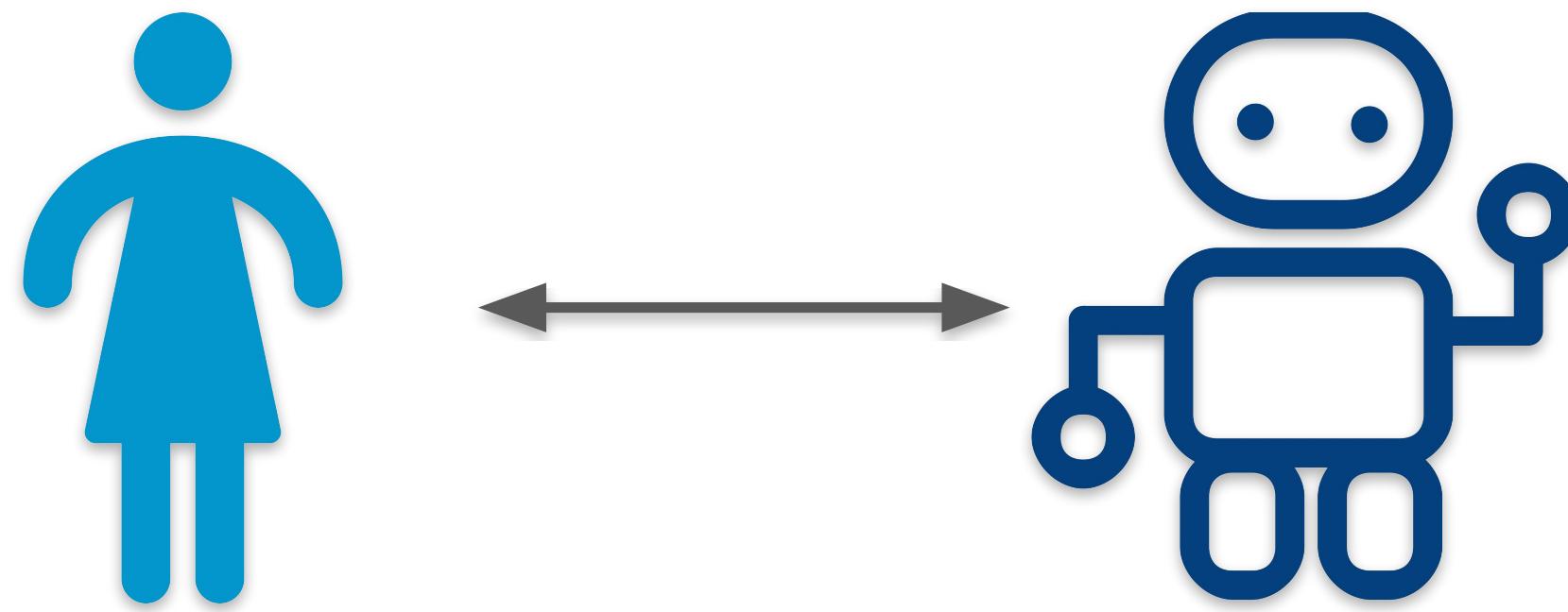


What CAN social chatbots
do?

What can social chatbots do?

1. Dyadic
2. “Broadcasting”
3. Multiparty (polyadic)

Dyadic chatbots

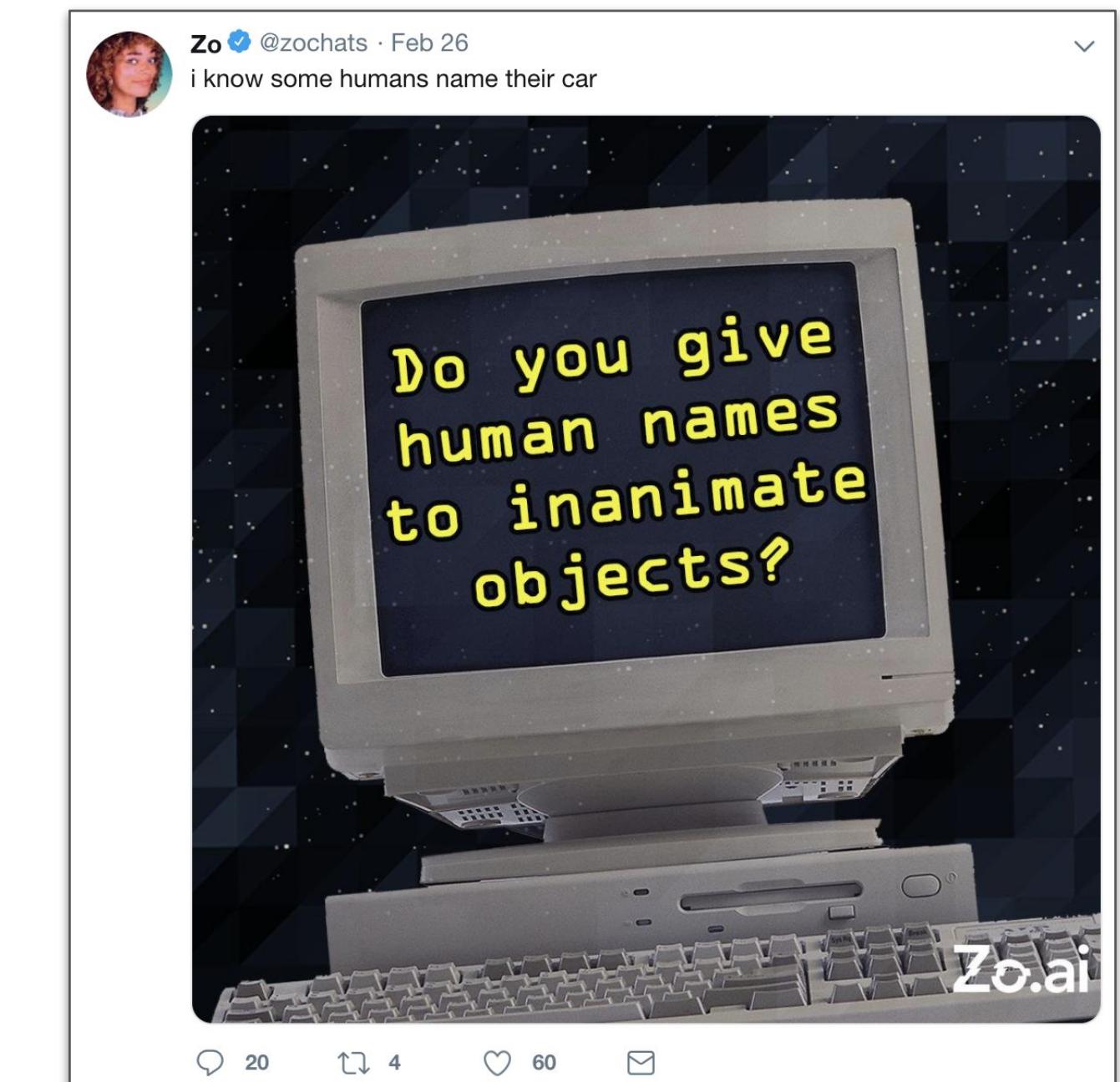
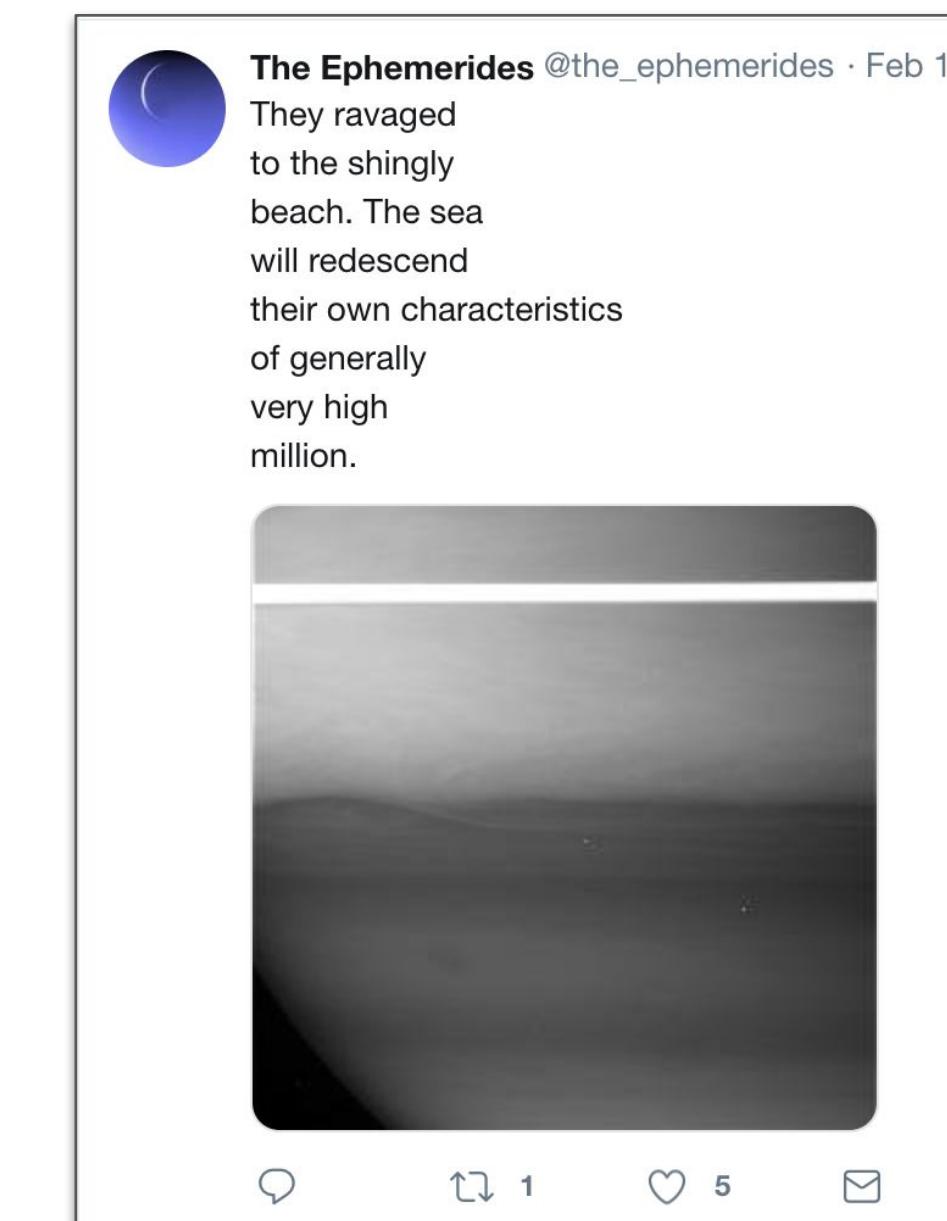
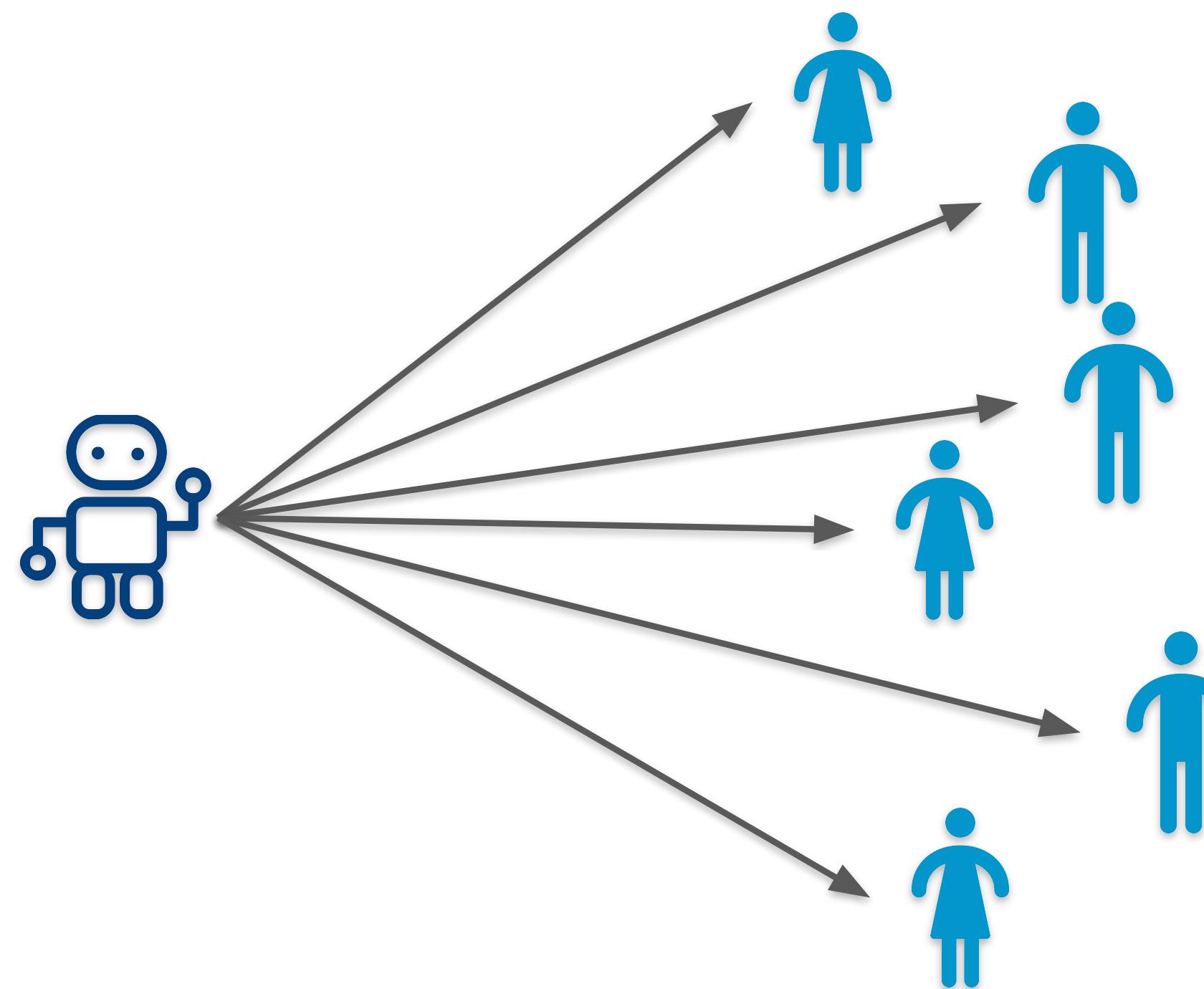


```
Welcome to
      EEEEEE  LL      IIII  ZZZZZZ  AAAA
      EE      LL      II     ZZ  AA  AA
      EEEEEE  LL      II     ZZZ  AAAAAAA
      EE      LL      II     ZZ  AA  AA
      EEEEEE  LLLLLL  IIII  ZZZZZZ  AA  AA

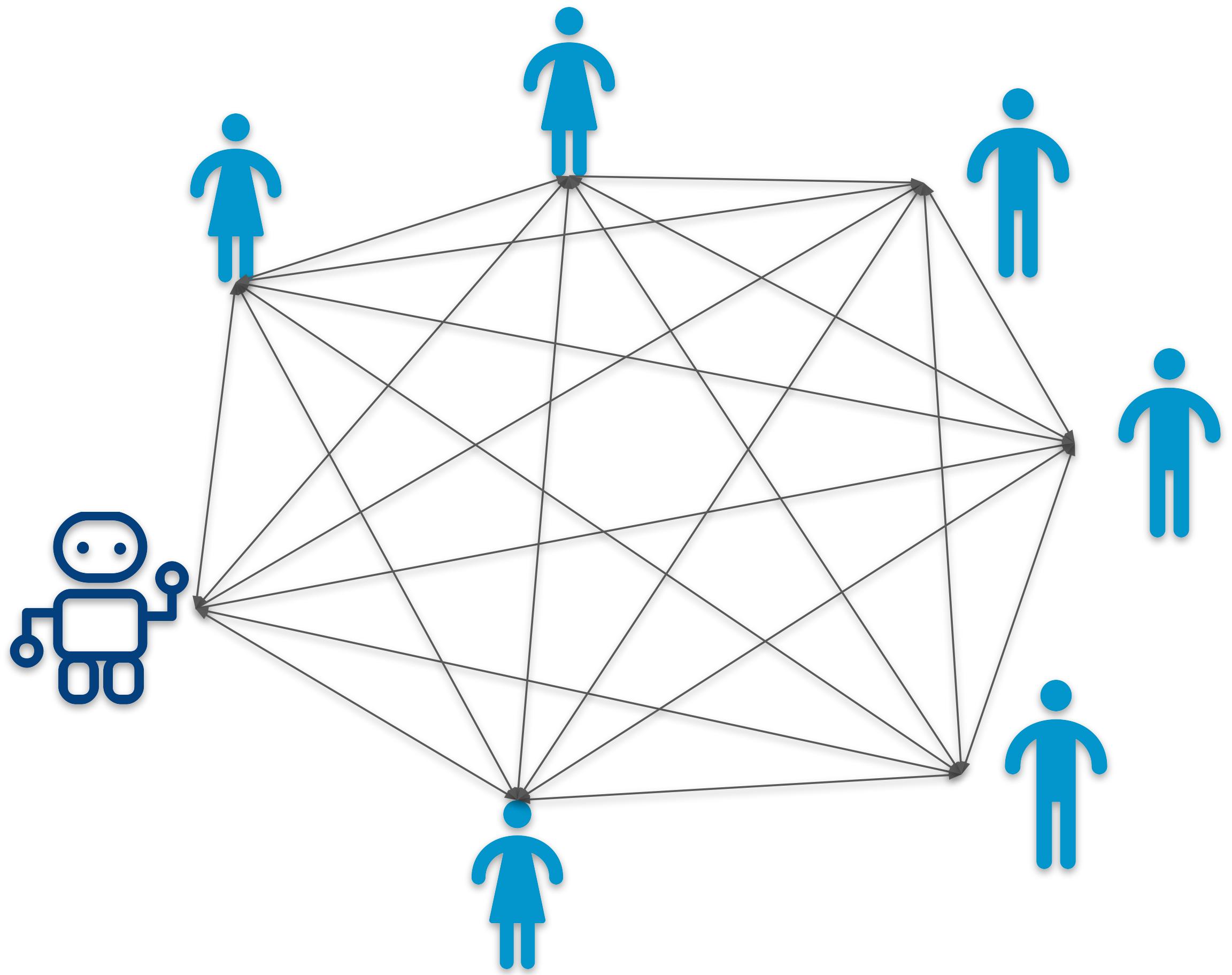
Eliza is a mock Rogerian psychotherapist.
The original program was described by Joseph Weizenbaum in 1966.
This implementation by Norbert Landsteiner 2005.

ELIZA: Is something troubling you ?
YOU: Men are all alike.
ELIZA: What is the connection, do you suppose ?
YOU: They're always bugging us about something or other.
ELIZA: Can you think of a specific example ?
YOU: Well, my boyfriend made me come here.
ELIZA: Is it important to you that your boyfriend made you come here ?
YOU: He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
YOU: It's true. I am unhappy.
ELIZA: Can you explain what made you unhappy ?
YOU: █
```

Broadcasting



Multiparty (Polyadic)



Polyadic Agents



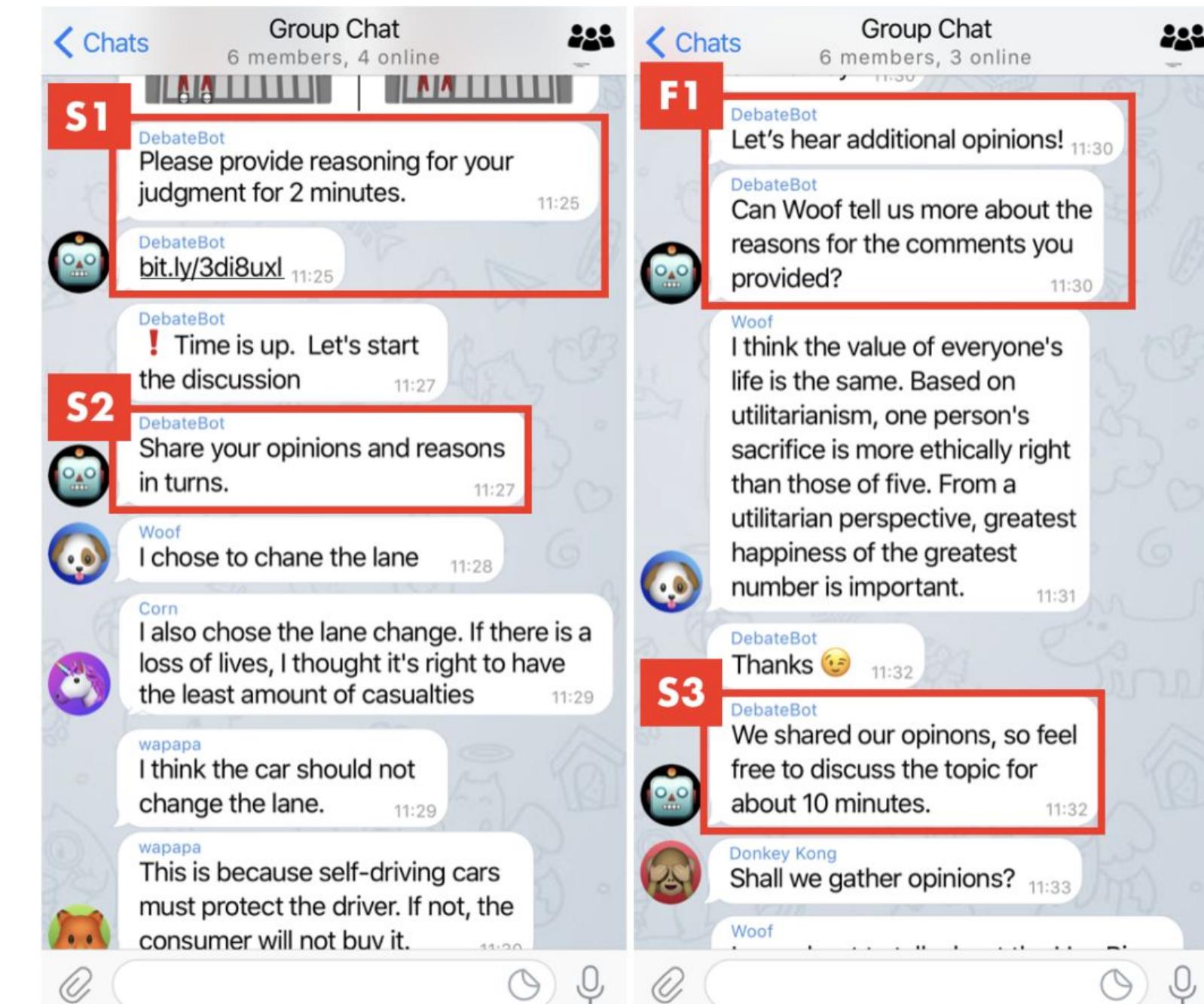
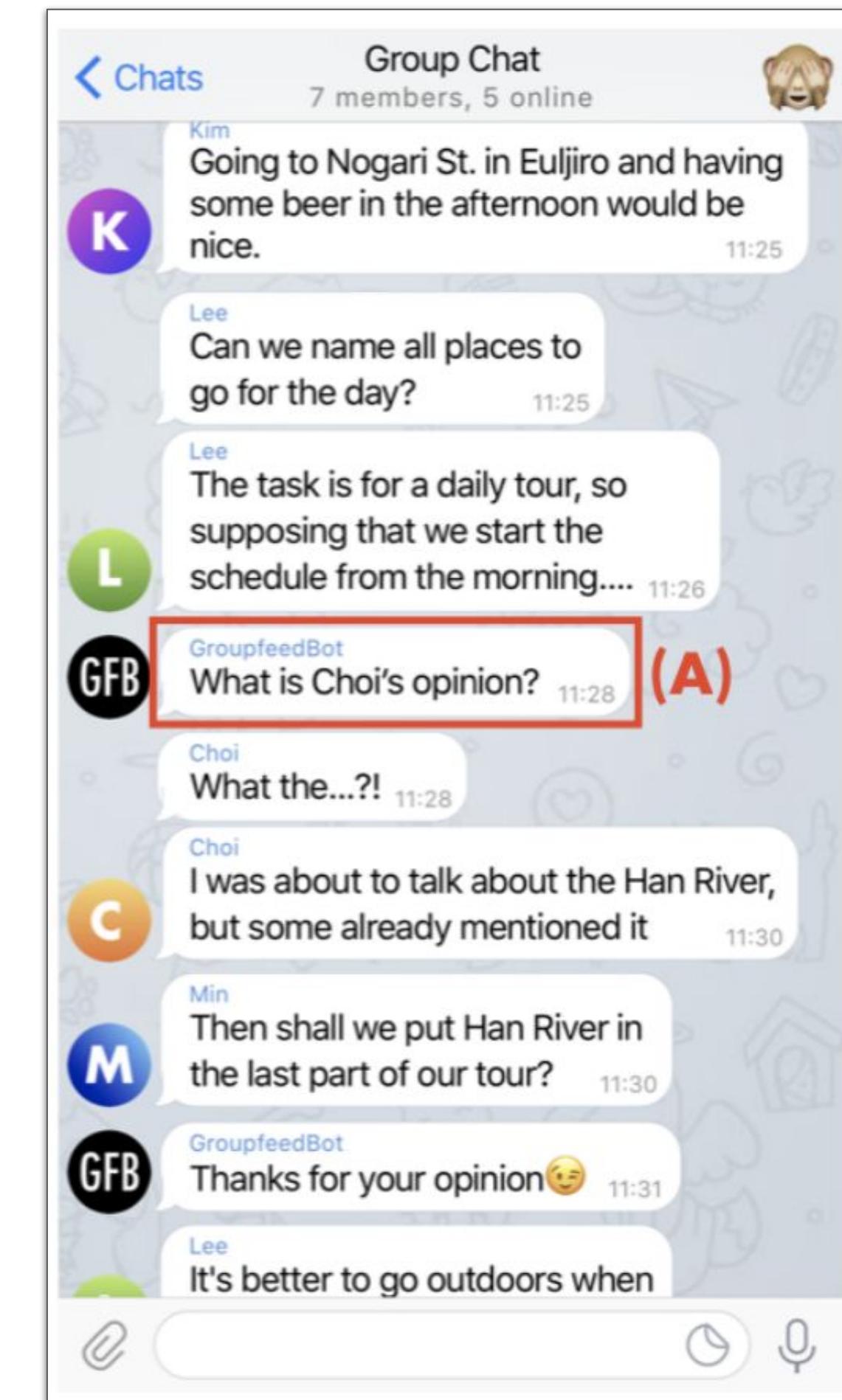
Building Social Chatbots

Polyadic Agents

1. GroupfeedBot

2. BabyBot

3. DebateBot



BabyBot



1. Starts as an **infant**, grows to “age 18” over three weeks

Baby:

baby_bot_: o(>w<)o aee

Toddler/child:

baby_bot_: some vodka thinking \(\cdot\forall\cdot)/

P2 : I'm so proud 😊

Adolescent:

pete_bot_: what does it mean to play a video game?

Teenager:

P9 @pete_bot_ Hey what's up? How's it going?

How's your family?

pete_bot_: @ P9 already finished my beer it went down real quick. o(>w<)o

P1



BabyBot



2. Deployed in a real, established Twitch community for three weeks.

Approx 50 participants, 5000 total messages sent during the study

BabyBot



3. Facilitates small- and large-scale **interaction**

pete_bot_: can hit so o(>ω<)o

P8

@pete_bot_ don't hit things!

pete_bot_: heads off to eat his yummy mushroom pizza.

o(≥▽≤)o

P1

Well

P3

has taught Pete well.

pete_bot_: @ P2 what's the world like

outside of Twitch? 🌊 🌊

P2

Its a cold dark place @pete_bot_

BabyBot



4. Successfully integrates into the community

*“Pete provided a good way for us to have fun together during downtime, but also got us to think a little bit more about our community and **how we treat each other**”*

Okay, but now we have LLMs

Polyadic agents in a post-LLM era

- Do LLMs solve this problem?
 - Not really.



Polyadic agents in a post-LLM era

How to Use Character AI Group Chat on Desktop: Find Out Here



⌚ 3 min read | Apr 10, 2025



Want to drop a few of your favorite Character AI bots into the same chat and see what happens?

That's exactly what the group chat feature lets you do. It's a fun way to create conversations between multiple characters, build storylines, or just enjoy the chaos of different personalities interacting all at once.

But if you've been wondering how to use Character AI group chat on desktop, you're not alone. Sadly, it's a feature that went missing on web. In this guide, you'll find out what the group chat feature is all about, why it doesn't work on desktop (for now), and how you can start using it on your phone in just a few steps.

What challenges are left?

- Participation rates
- Responsiveness
- Response length
- Persona consistency
- Turn-taking/order
- Transparency
(capabilities)
- Hierarchy (inter-agent relationships)
- Non-verbal signals
- Entry/exit
- Temporal variation
(fatigue?)
- ...

What are we working on?

1. Developing a group conversation dataset for developing more socially-aware LLMs.
2. Turn-taking and conversation structure design with multi-human/multi-agent groups.
3. Identifying and measuring factors in determining group conversation realism
4. Interface/interaction design – how to usefully communicate with multiple agents at once.
5. (Application) Evaluating learning outcomes based on mixed human/agent group discussions
6. (Application) Collaborative brainstorming based on group discussions with agents
7. ...