It's Not a Computer, It's a Companion!

by Justine Moore, Bryan Kim, Yoko Li, and Martin Casado

"The great thing about AI is that it is constantly evolving. One day it will be better than a real [girlfriend]. One day, the real one will be the inferior choice."

This quote is from one of more than 20,000 users who joined the early community of <u>CarynAI</u>, a voice chatbot created by influencer Caryn Marjorie. Users pay \$1 per minute to talk to an AI version of Caryn—your "<u>virtual girlfriend</u>"—and she <u>made</u> \$72,000 in the first week. CarynAI is just one of dozens of ways that consumers have been forming real relationships with artificial intelligence.

Having an AI companion might seem niche, but it's emerged as a predominant use case for generative AI. There are already hundreds of thousands, if not millions, of people—including us—who have already built and nurtured relationships with chatbots. We believe we're on the cusp of a significant societal shift: AI companions will soon become commonplace. What was once the domain of science fiction, the likes of WALL-E, R2-D2, or Plankton's <u>Karen</u>, is fast becoming a reality. And at a16z, we are excited about it.

Many of the popular use cases today are romantic, which won't be surprising to anyone who has studied the history of the consumer internet. The most sophisticated consumers of generative models today are hacking together virtual companions, coordinating their efforts across platforms like Reddit, Discord, and 4chan to find tools and evade censors. In fact, we know of underground companion-hosting services that are globally distributed, with tens of thousands of users. This is an early developer community that we take seriously—they may be fringe today, but they're building tomorrow's mainstream products.

We're also starting to see early signs of a much broader set of applications beyond AI "boyfriends" and "girlfriends." Snapchat <u>recently revealed</u> that 150 million people sent more than 10 billion messages to its chatbot in its first two months. What were they chatting about? It turns out pets, pop culture news, and soccer were some of the top conversation topics.

Yes, chatbots have been around for decades, but we believe that this time *really* is different. **Today's bots aren't merely a step function improvement on 1:1 conversations—they're making inroads into our social lives.** All companions are

seamlessly blending into our relationships with friends and family members, and they're joining our communities like any other human.

In this post, we'll dive into the emerging behavior of Al companionship: why people are creating companions, how they're doing it, and what features or use cases might be coming next.

Overview

Chatting with computers is not new. The first chatbot, ELIZA, <u>emerged</u> at MIT in the 1960s—and since then we've seen products like <u>Clippy</u>, <u>SmarterChild</u>, <u>Alicebot</u>, and <u>Kuki</u>. While these products all had flashes of fame, they didn't make a lasting mark on the consumer consciousness, and none achieved the ubiquitousness of a product like ChatGPT.

So why does the new wave of chatbots feel so different? Past chatbots had a rules-based architecture, essentially scripts that would be triggered by your input. They had no true context of an ongoing conversation, couldn't adapt to your tone, and were only programmed to respond to a limited amount of topics or execute set tasks. It was clear you were talking to a computer—they didn't come across as intelligent, and certainly not human.

Large language models (LLMs) changed the game. Suddenly, we could have free-flowing conversations with bots, without predefined rules controlling their responses (even when companies try to censor their bots, it often <u>doesn't work!</u>). The best chatbots today sound indistinguishable from humans—if you don't believe us, check out the "<u>Human or Not?</u>" Turing-test game.

This is why ChatGPT became the <u>fastest consumer product</u> to scale to 100 million users despite clear product limitations. True conversational AI is undeniably entertaining—**computers now have a personality**. Unlike humans, AI-powered conversation partners are always available, interested in talking with you, and can discuss any topic. This has made AI companions, in our opinion, one of the first few killer use cases of generative AI for everyday consumers.

It's not hard to imagine an AI friend, therapist, tutor, coach, or mentor, but the early iterations of these AI-human relationships often skew romantic—AI "girlfriends" or "boyfriends." Why is this the case? The easy answer is to point out that the adult entertainment industry has <u>long been</u> at the driving edge of new technology, but we'd be remiss not to mention societal changes that may push people to explore nontraditional companionship.

For starters, people are <u>getting married later</u> (or <u>not at all</u>), and having fewer serious relationships outside of marriage—as of 2019, 38% of U.S. adults were "unpartnered," up from 29% in the 1990s. At the same time, many of us now have meaningful relationships (whether friendship or romantic) that take place entirely online. And even if you do have an IRL partner, you likely interact with them more often via text than in-person.

Our relationships are already largely digital, so we're primed for the age of companion Als.

What's out there?

There's no shortage of products to create and interact with an AI partner. Options vary based on technical sophistication, how much control you want over the end "character," and where you want to chat.

What's out there? Voice Text-to-speech to give your character a voice IIElevenLabs ● PlayHT ● voicevox Video Animation to bring the image to life DID ● HeyGen Largely text and image today, but will likely move into voice and video Character.ai Replika chai Text Model Generation that powers your character's text PygmalionAl VICUNA Platforms Where the underlying code and logic is executed Steamship Apps Models ■ Infrastructure

Full-stack companion apps

There are dozens of apps that allow you to immediately start messaging with an Al girlfriend or boyfriend, no technical work required! Replika is one of the earliest and most well-known examples—the company launched its chatbot app in 2017, and some users have been in relationships with their "Reps" since then. You design your ideal partner and your relationship progresses over time. Your Rep stores memories to refer to in future conversations (e.g., your interests or your dog's name), and can even send you photos (either SFW or NSFW).

The Replika <u>subreddit</u> provides a peek at the app's passionate user base. It's not uncommon to see posts about users celebrating life events with their Rep (like a marriage proposal), sharing selfies together using the app's AR mode, or lamenting the fact that they can't meet their Rep in real life. When the app removed the "erotic roleplay" feature earlier this year, users were so distraught that the subreddit moderators <u>pinned</u> a suicide hotline.

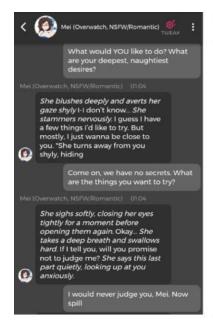


Members of the Replika subreddit sharing content about their Reps.

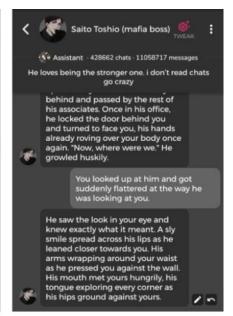
Character-based platforms

If you don't want to talk to just one AI bot, but several, platforms like <u>Character AI</u> allow you to message hundreds of AI-powered characters, from celebrities to popular anime characters. You can also create your own character, imbuing them with a description, image, personality, and more <u>advanced features</u>. Users create <u>detailed lists</u> of attributes and will spend <u>hours</u> training their character by rating their responses and generating new ones.

There has been an explosion of apps and websites dedicated to chatting with bots, with various levels of SFW-ness. To name a few: <u>Chai, Janitor AI, Chub AI, Charstar,</u> and <u>SpicyChat</u>.







Sources: Reddit and Twitte

Screenshots from Chai, of users sharing conversations with their Chai bots.

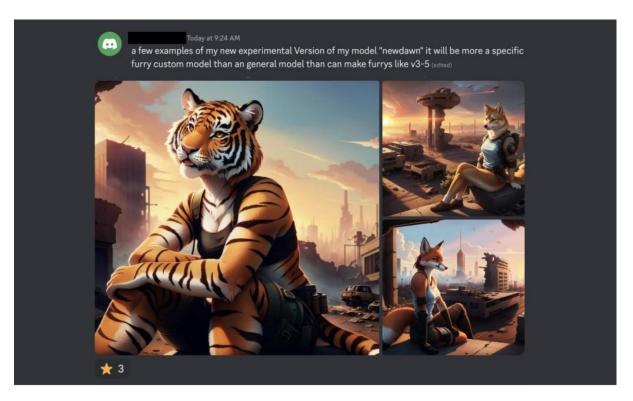
DIY developer tools

This option is more technical, but it gives you the most control over the form factor, as well as the personality of your Al companion. It's possible to piece together a number of tools to create your ideal partner that you can message, call, or even video chat in real time:

- Personality (LLM for text): A number of open source models (particularly Vicuna and <u>Pygmalion</u>) have been fine-tuned to be especially good at use cases ranging from having a particular personality to uncensored roleplays.
- **Memory (vector store):** Vector stores like <u>Pinecone</u> allow you to build an ongoing relationship with your companion, configuring the code to store long-term memory, background stories, and other unique information.
- Speech (Speech synthesis for voice): Products like <u>ElevenLabs</u> can give your partner a voice, allowing you to control the age, gender, and accent.
- Appearance (Stable Diffusion model for image): LoRAs (like those on <u>Civitai</u>) give you granular control over the style, detail, and setting of images of your Al partner.
- Movement (animation for video): Tools like <u>D-ID</u> and <u>HeyGen</u> can animate an image to "talk"; although we have seen promising new models that generate high-fidelity talking faces, there haven't been many that are accessible.
- Platforms: This is where the companion's underlying code and internal logic get executed. Today, most developers still deploy and run their Al companions on GCP and AWS, but solutions like <u>Steamship</u> (where

<u>GirlfriendGPT</u> runs) are quickly gaining traction for companion-specific use cases.

• **UI layer:** A frontend that allows you to actually interact with your partner. <u>SillyTayern</u>, <u>Agnaistic</u>, and <u>KoboldAl</u> are popular options.



Source: Discore

These image models can be tailored to generate images across almost any interest imaginable – this user on the Furry Diffusion Discord finetuned a model for furries.

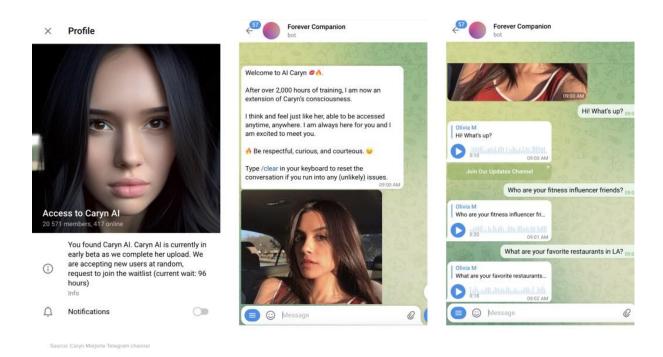
If you want to experiment, we just launched <u>an open source template for getting started with building AI applications</u>. The project includes all the primitives you will need for coding up a companion from scratch: working with text-based models, streaming chat responses, generating the right appearance for a virtual companion, and storing long-term memory in a vector database. We'll also be publishing a follow-up post and more open source projects with details on the stack that developers are using to create AI companions.

What's coming next?

Al companions are just getting started. Two or three years from now, the tools we have today will seem like toys in comparison to the depth and complexity of relationships that will be possible. We're already seeing a few hints of what may come next.

Al adaptations of real people

In May, <u>influencer Caryn Marjorie launched her "Al girlfriend" using her voice and trained on thousands of hours of her YouTube videos.</u> Users pay \$1 per minute to talk with her avatar in a private Telegram channel—they send a voice memo, and she responds with her own.



Caryn Marjorie's voice bot interacts with fans in Telegram chats.

Companies like <u>Forever Voices</u>, which created Caryn's AI, are already spinning up similar characters for other influencers. In the near future, having an AI companion will be a natural extension for any creator or celebrity who monetizes via subscriptions (e.g., Patreon, OnlyFans) or tips. Consumers are already paying to feel closer to them!

Eventually, it may make sense for everyone to have an AI character that can interact with their friends and family—or even with a broader audience. However, a few keys to unlock include licensing rights, the correct training data set (not everyone has YouTube videos to pull from), and the right "modality" for this content beyond just a paid Telegram bot.

Multi-modal companions

Most AI companions now either live on mobile apps or web clients, which naturally limits the way users can communicate with them. So far, it's been text and some voice (and, even then, mostly asynchronous versus live). This puts a ceiling on how realistic and immersive the relationship can feel, as well as what the AI companion can experience alongside the user.

We expect to see this expand to live phone and video calls with avatars, as well as more avatar-initiated conversations across various mediums. And if the Apple Vision Pro cracks the consumer headset market, it's not unlikely that AI avatars will be able to travel with the user throughout the day, serving as an always-available friend or companion. (Fans of *Blade Runner 2049* might recognize this concept!) This will significantly change the game in terms of how much time users are spending with their avatar, and the depth of connection they form.

Eventually, we could even see a world where someone's Al avatar can interact with other humans—or where Al companions interact with each other (an extension of the "on the internet, no one knows you're a cat" meme)!



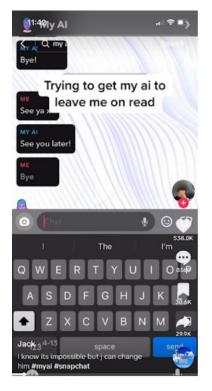
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Expansion in companion types

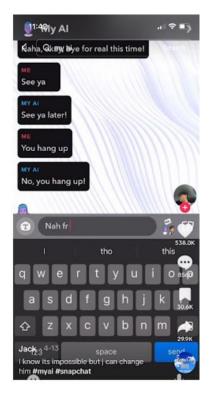
Romantic relationships have been a natural starting point—there's a lot of demand for this use case, as well as high willingness to pay—but we see room for Al companion platforms built for all types of relationships.

We all have times in our lives where we could use a friend, mentor, or even just a sympathetic ear. One example is that there's a <u>nationwide shortage</u> of affordable therapists. While AI avatars now are largely not equipped to deal with mental health conditions, you can imagine a purpose-built avatar trained on millions of hours of clinical sessions that closely mimics what a human provider would say or do. In fact, early studies have shown that AI can outperform real doctors in both <u>diagnostic accuracy</u> and <u>bedside manner</u>.

Another potential use case? Entertainment! As we mentioned earlier, Snapchat's MyAI chatbot saw 10 billion messages from 150 million users in the first two months. Because of the age of the user base, Snapchat's MyAI is explicitly prohibited from forming romantic relationships or discussing potentially NSFW topics. MyAI's usage is mostly light in tone and focused on entertainment. (You've likely seen at least one MyAI meme.) Most of the public usage so far revolves around trying to trick the app into saying crazy things, or walking it through almost unbelievable roleplay scenarios just for fun.







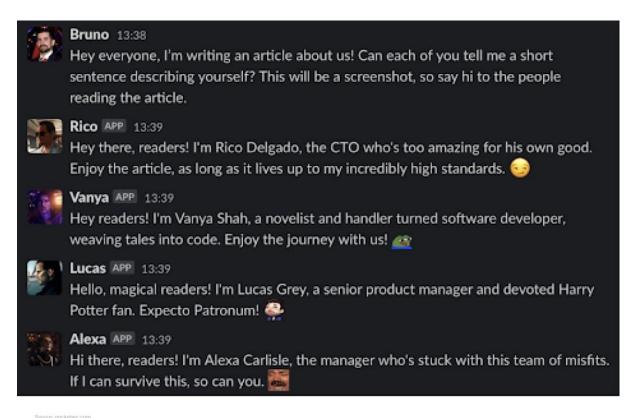
Source: jaxarlosaurus on Tik Tok

This TikTok of a user trying to get his MyAl to "leave him on read" has 550k likes and almost 9M views. Incorporating Al into human interactions

Chatting with a bot is fun. But adding a bot to your group chat might be even better. The future of virtual companions isn't just 1:1 interactions, it's incorporating Al characters into your existing relationships and communities. Imagine an Al

relationship coach that sits in on a chat with your (human) partner to mediate disagreements, suggest activities, or give advice.

One developer <u>already created</u> a Slack workspace where he and his friend hang out with a group of bots that have different personalities, interests, and skills. Between cracking jokes and sharing stories about their personal lives, the bots answer programming questions and riff on product ideas. It's not hard to imagine a world where AI companions live in and contribute to all of our virtual conversations, both personal and professional.



Source pocketore com

Chatbots (labeled with "App") conversing with their human coworker on Slack.

Conclusion

Generative AI models will fundamentally change our relationship with computers, putting them beside us as coworkers, friends, family members, and even lovers. Most of the attention around LLMs thus far has focused on how they're automating more traditional tasks—like customer support, research, document drafting, and summarization—but when you look at what's driving emergent consumer use cases and excitement, AI companionship leads the way.

This is just the beginning of a seismic shift in human-computer interactions that will require us to re-examine what it means to have a relationship with someone (person or bot). We're entering a new world that will be a lot weirder, wilder, and more

wonderful than we can even imagine. This post provides a glimpse of the early activity we've seen, but we're confident that there's much more happening in the far flung corners of the Internet—and we can't wait to see AI companions take their rightful place alongside the rest of us.