

AI podcasts for the summer

As with last summer, COVID-19 is still with us, but there is a semblance of what life was like before the pandemic. Here, we recommend AI podcasts from the past year that may inform, inspire or entertain, as we get an opportunity to travel or take time away from regular activities.

During the pandemic, the Internet and digital technology have brought people together in new, virtual ways. An Internet connection is all that is needed to readily communicate with others by text, voice or video. The pandemic has turned this new virtualized ritual into a default way of interacting. Whether by reading discussions on Twitter, looking at posts on Instagram, watching movies and documentaries on Netflix, or listening to audiobooks on Audible, there are more opportunities than ever to be exposed to other people's opinions and thoughts. The long-term consequences of this virtualization of community are hard to appreciate, but as in-person travel and meetings are coming back only slowly, it has a prominent role to play in academic life now.

Podcasts are one way in which conversations in virtual spaces reach the general public, providing a platform to anyone to broadcast their point of view on current topics. The public sphere described by thinkers such as Jürgen Habermas — “a realm of our social life in which something approaching public opinion can be formed. Access is guaranteed to all citizens”¹ — has expanded at scale. In some sense, what in ancient Greece took place in *agoras* — the main public space of political and social life in Greek *poleis* — now happens in a distributed and extended virtual space, reaching everyone at all times through laptops, tablets and phones.

For those interested in machine intelligence, there is no shortage of interesting conversations in this digital space. In a recent [episode](#) of the Robot Brains Podcast, host Pieter Abbeel, a professor at the University of California, Berkeley, speaks with deep learning pioneer Geoffrey Hinton. The two experts dive headfirst into topics in machine learning, such as backpropagation, with a keen interest in the relationships between artificial neural networks and how the brain works or could potentially work. As for backpropagation, Hinton says, “All of existing AI... is built on something that's quite different from what the brain is doing.” He thinks researchers will crack “in the next five years” how the brain abstracts



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structure from limited data. At one point, Abbeel observes that Hinton is thinking about spike timing, a topic that relatively few people in AI are working on compared with trendy topics such as large language models. Hinton replies: “It's always a good idea to figure out what huge numbers of very smart people are working on, and to work on something else.” In a follow-up [episode](#), Hinton addresses questions from Twitter, such as how important embodiment is for intelligence, and what advances or topics will come next in AI.

In season 2 of [DeepMind: The Podcast](#), professor and science presenter Hannah Fry speaks to DeepMind researchers about recent machine learning projects at their company. The episodes cover a range of topics, including the story behind [AlphaFold](#)², large language models, efforts in developing cooperative AI systems, and embodiment and physical intelligence in robots, as well as DeepMind's idea of artificial general intelligence — what it could look like and their vision for how to get there in the next few decades. As the host asks whether people in the field “still roll their eyes” at the very idea of

artificial general intelligence, Shane Legg, co-founder of the company, replies: “Every year it becomes less.” Also discussed are recent and future scientific applications of machine learning, such as controlling nuclear fusion, wildlife conservation in the Serengeti ecosystem, and more. One episode focuses on real-world applications, such as WaveNet, the speech-generative model that powers Google's voice assistant and may one day be deployed to return people with speech impairment their own voice. The show ends with an important conversation on social and ethical challenges that arise as AI enables more-powerful technologies, and with an interview with the CEO of the company, Demis Hassabis, who also recently [joined](#) Lex Fridman's podcast for a wide-ranging conversation.

The podcasts described above are conversational and informative. Another format is proposed at [The Learning Salon](#)³. Here, researchers Ida Momennejad (Microsoft Research), John Krakauer (Johns Hopkins University) and Joshua Vogelstein (Johns Hopkins University) create a publicly accessible forum, inspired by the Enlightenment and thinkers such

as Habermas and Wittgenstein. The podcast was created early in the COVID-19 pandemic, when scientists were suddenly cut off from attending in-person conferences and meetings. The Learning Salon is highly interdisciplinary, in line with the varied backgrounds of the hosts, which include neuroscience, psychology, philosophy, engineering and machine learning. The format is unique: an invited speaker gives a 15- to 20-minute talk, followed by about 2 hours of questions and conversation, including interactions with online participants. Guests include [Evelina Fedorenko](#) (MIT), who uses artificial language models to investigate how human brains use language; [Jay McClelland](#) (Stanford University), who asks why people are still smarter than machines; and [Anima Anandkumar](#) (Caltech and NVIDIA), who reminds us that although advances in data,

algorithms and computation led to deep learning, new ideas are needed to bridge the gap between AI and human intelligence.

Although it may be argued that podcasts are mostly a medium of entertainment, we believe that the shows mentioned above can be instrumental in moving the conversation about AI research and its implications forward and making it accessible to an audience not limited to experts only. Podcasts have the potential to inform public opinion, as well as to stimulate discussions that are needed as the field progresses. But how does listening to (or watching) podcasts differ from reading a blog or going straight to a research paper? We think podcasts can complement more traditional science outlets, as they offer a more intimate and informal experience owing to their host-listener nature. They can provide valuable insights directly from experts one would be

unlikely to cross paths with during virtual conferences. Most importantly, they help to bring back the human factor in engagement with science, and acquaint us with those who make it progress during a time in which in-person interactions have become more difficult. The human aspect is indeed what is needed to build an authentic sense of community and to help make science a more fulfilling and inclusive place for everyone involved. □

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References

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