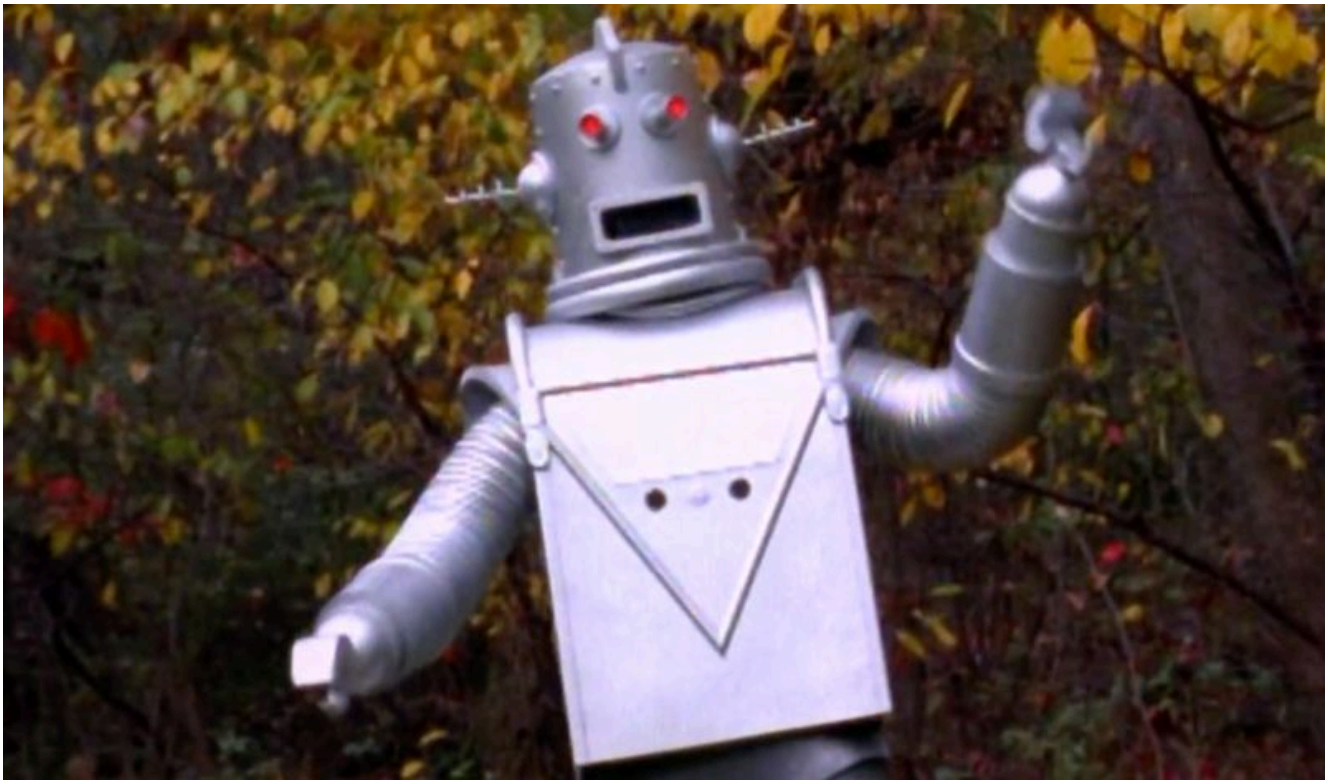
When AI takes on Eurovision: Can a computer write a hit song?



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Imagine assembling a crack team of musicologists to compose the perfect Eurovision hit, only to end up with a song that crescendos as a robotic voice urges listeners to “kill the government, kill the system.”

That was the experience of a team of Dutch academics who, after an experiment in songwriting using artificial intelligence algorithms, inadvertently created a new musical genre: Eurovision Technofear.

The team—Can AI Kick It—used AI techniques to generate a hit predictor based on the melodies and rhythms of more than 200 classics from the Eurovision Song Contest, an annual celebration of pop music and kitsch. These included Abba's "Waterloo" (Sweden's 1974 winner) and Loreen's "Euphoria" (2012, also Sweden).

But to generate the lyrics for the song "Abuss," which the team members hoped to enter in the inaugural AI Song Contest this year, they also used a separate AI system—one based on the social-media platform Reddit. It was this that resulted in a rallying cry for a revolution.

Like the notorious Tay chatbot developed by Microsoft in 2016 that started spewing racist and sexist sentiments after being trained on Twitter, the fault lay with the human sources of data, not the algorithms.

"We do not condone these lyrics!" stresses Janne Spijkervet, a student who worked with Can AI Kick It and ran the lyric generator. She says the Dutch team nevertheless decided to keep the anarchist sentiment to show the perils of applying AI even to the relatively risk-free environment of Europop.

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The use of AI in music composition is now on the cusp of the mainstream as more musicians and songwriters look for tools that inspire different types of music. The AI Song Contest, organized by Dutch broadcaster VPRO, is one of the first events to take the process of using algorithms to compose original music out of academia and avant-garde experimentation and into the commercial world.

The competition is inspired by Eurovision and has gained greater prominence since the cult event, which was due to take place in Rotterdam this month, was cancelled due to the

coronavirus pandemic. The European Broadcasting Union, which organizes the 64-year-old contest, has endorsed the computer-based version and will act as a vote supervisor.

The AI version is a much smaller affair, with only 13 entries in its first incarnation (compared with the 41 countries that were due to compete in Rotterdam). However, the quirks of the original contest have come to the fore in the AI world as well. Alongside "Abuss," which its creators describe as atonal and creepy, sits an Australian entry with the same sheen as a chart-topping dance hit but with a distorted and subliminal AI-generated chorus of koalas, kookaburras, and Tasmanian devils.

Meanwhile, the song "I'll Marry You, Punk Come," composed by German team Dadabots x Portrait XO, used seven neural networks in its creation. The resulting piece of music blends lyrics from babble generated from 1950s acapella music with AI-generated death-metal vocal styles and a chromatic bass line spat out of a neural network trained on Bach's canon.

The contest will be judged along the same lines as the established competition with a public vote tallied against the opinions of a panel of expert judges. Ed Newton-Rex, who founded the British AI compositional startup Jukedeck, is one of them. He explains that the panel will be looking at the process of how machine learning was applied as well as creative uses of algorithms—such as the "koala synth"—and the quality of the song. The judges will also be asked to factor "Eurovisioness" into their thinking, although he admits, "I have no idea what that means."

VPRO does not expect "billions of people" to tune into the event but says that many Eurovision fans will follow the livestreamed announcement of the winner on May 12. The hope is that the computer version could itself prove a hit and pave the way for AI to influence Eurovision proper through song composition or, over time, robotic performance. "That is my

dream,” says Karen Van Dijk, the VPRO producer who came up with the concept.

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