

IDEAT China

September 2021

What has (and hasn't) the neural network learnt in the project 'Zizi - Queering the Dataset'? How did the project start?

Zizi - Queering the Dataset (2019) was my first exploration into thinking about queer representation in machine learning training sets. I was struck by how normative and homogenous the identities that these systems are built on often are. This results in facial recognition systems that often fail on marginalised communities such as women of colour or LGBTQ+ people. This can be visualised when using a GAN (generative adversarial network) which allows you to generate new 'fake' faces and explore what the system has (and hasn't) learnt from the data which it has been given. For my project I took this system, trained on a commonly used dataset of faces containing 70,000 photographs of faces gathered on the internet and then I disrupted it by re-

training it on 1000 faces of drag artists. Drag queens, drag kings and gender-fluid drag things are LGBTQ+ performers who celebrate difference and otherness through performance and entertainment. For me drag was the perfect way to highlight issues of representation in the field of artificial intelligence around gender and queerness and in 'Zizi - Queering the Dataset' this was what I wanted it to learn from.

I'm wondering how would you describe the bias that the network has learnt from the way society sees and identifies gender?

I think that these systems are built as reflections of society, so if systemic racism, misogyny, transphobia and homophobia exist in society then we will build systems that inherit these biases. This may result in algorithmic unfairness and discrimination against marginalised communities in ways we may not be aware of. In the UK for instance people tend to have quite a binary view of gender and stereotypical views on gender roles, although many cultures

around the world historically have embraced and celebrated gender fluidity and not had such patriarchal and fixed views on gender. The result of this is that apps and services are built (often unconsciously) with certain gender roles and biases; such as facial recognition incorrectly recognising trans people, the way we often gender our AI assistants with more affable female voices and translation software reinforcing harmful stereotypes and prejudices. Not to mention hiring software, health services and ad systems de-prioritising and performing less well for women, people of colour and LGBTQ+ people.

I'm so fascinated by the digital video you made "Zizi & Me - Anything You Can Do (I Can Do Better)", it's shocking to see how much the deep fake tech can do.

Yeah, its quite bizarre but also entertaining to watch. Zizi & Me (2020) was my first attempt at working with performance using artificial intelligence. For the project I worked with my collaborator 'ME The Drag Queen' - who is one of London's most established

drag performers. We chose a well known musical theatre song 'Anything You Can Do (I Can Do Better)' as an amusing way of satirising the idea that and AI is something that we might mistake for a human. This tends to be one of the dominant myths around artificial intelligence, however in reality there is nothing human like about these systems and the more key question is who these systems are being built by and who they're being built for.

We had making the video and it was fantastic to see the Zizi character come to life with ME's movement and aesthetics, it felt like a real collaboration with the deepfake process.

You said you're especially interested in when the AI learning system breaks down and when it makes mistakes. What do you think are the current bottlenecks for machine learning technology?

When making Zizi & Me the most exciting moments for us where the parts where the deepfake figure glitched and failed showing the processes underlying

the deception. These were the moment's where the system did not have enough training data to know how to re-create a realistic looking deepfake. For me as an artist there's a lot to explore in the mistakes and failures of these systems - hacking with them and repurposing them for applications they weren't originally intended for. This often reveals underlying poetry as well as exposing problems with how these systems are built, such as lack of training data which can result in both a drag queen failing to do the splits as well as serious problems for humanity.

From the outcomes of your ongoing project, what do you think that AI can teach us about drag, and what drag can teach us about AI?

Well Drag is celebratory and entertaining art form that I think can bring a new perspective to the field of artificial intelligence research which can often be either quite oblivious to social problems or on the flip side can be overly dystopic about the problems we face. Drag and queer performance is a wonderful way to offer alternative utopias and

subverting the dominant conversation. I also feel that AI is often quite an inaccessible field (being either commercial and black boxed or academic and dry), drag performance on the other hand coming from popular culture can allow more people to enter into the conversations and understand a little more about how these systems work and are being built. What AI can teach us about drag on the other hand is also interesting, AI and deepfake technology has empowered the performers involved in the Zizi project to think about new ways of creating performance and allowed us to conceive new possibilities of what can be imagined on stage.

Perhaps the way our brain studies the world is to see, memorize, categorize, tag and judge, and the perspectives of each of us are constructed based on our past experiences, which inevitably leads to bias. Do you think a machine can do better or worse - meaning more objective than subjective - when it learns and sees the world? And why?

This is an interesting idea and yes in many ways I think machines are better decision makers than us because of their abilities to take in so much more information at once and to be seemingly objective. Perhaps this will be even more true as we move towards a place where these systems can learn from data which hasn't been directly gathered or mediated by humans (such as with reinforcement learning where a machine is given a goal and creates its own training sets such as with AlphaGo). People often imagine the aim of artificial intelligence is to create human intelligence. I think that's a bit misguided and that in fact it's more that we can learn more about ourselves through the development of these systems. In fact DeepMind, one of the most prominent AI companies was founded by neuroscientists hoping to learn more about the human brain. There seem to be some similarities in the way that our brains learn things through memories, experiences and sense data and the way that a cold number crunching neural network can start to see patterns in vast amounts of data (although it's best not to extend this metaphor too far). In terms of subjectivity and creativity humans

operate very differently which also leads to many of our flaws and perhaps it's true that a machine can be more objective but for the moment it still very much depends on who's behind the steering wheel.