Brainstorming session 2 Group 3

Transcript

00:00:02 Speaker 1

We also have discussed architectures and we talked about the potential of use depending on the task or the data that we have. So, for example, if you have music data, which can be audio versus symbolic MIDI data, that really, you know, that what architecture you use is really dependent on, is it audio, is it symbolic, and so on. And that has a huge effect. So we discussed things like VAEs, LSTMs, Transformer, what not. But one thing that we were talking about is how can we explore architectures, or more specifically tasks which are better suited for music and art, because a lot of these architectures come from sort of NLP, natural language processing, or computer vision domains, so the tasks that they were originally for might not be well suited for music tasks.

00:00:55 Speaker 1

And so from that moment we talked about biases and why might small data sets reduce the bias. Because, we also talked about how architectures can reduce bias. But, for example, we talked about the bias in the industry where for larger datasets or datasets which the industry might have, it's more fiscally driven, where, you know, someone with a small data set might be less biased anyway because it could be research driven or artist driven depending on who creates the datasets.

Small datasets can also be more structured, which can be easier for your model to learn your tasks. So, we were talking about that before like if you have a large data set which is noisy or sparse in terms of the features that you want to use, you might not be able to get it to generalize to whatever the task that you wanted to generalize to. So that's why small datasets might be useful. And also, one of the things we were talking about were the real time uses of the architectures. So, if your model is too big, then there might be too much latency. So you have to think about how can you host, like, how can you actively host your model in real time for the types of things that you want to use it for. So, do you want to use it to make music in real time? You can't host a big [inadible].

And we also talked, because there's a lot of artists on the table, we talked about sharing how we might share the models. And previously people have talked about, you know, sharing the actual models on GitHub, or other means. But as an artist, you know, they might not know what GitHub is, or things like that, and so how can you make that easy for them to access, and use, and also create their own datasets to customize it in a way that they want it to be. So you can have plugins or VSTs, Max for Live, etcetera, for DAWs for the

music software annotation. We discussed also the use of interactive instruments. So, for example, you have data which is gestural and you can also share it in different ways. So, through different hardware like you get with Bela, for example. Yeah, so I think that's pretty much it. We also talked about, within terms of architectural bias, so things, say, RNN versus Transformer models. RNNs have shorter memory. So, like you might be able to generate shorter sequences, where Transformers generate longer ones. So you know, there's lots of actual things that you think about when you're creating the model of what those architectures can do with the task [inaudible].

00:03:37 Speaker 2

OK, great, super good.