00:00:00:00 - 00:00:25:05

Clare

Hello and welcome. I'm Clare and you're listening to Microbe Talk, a podcast by the Microbiology Society. This episode, it's all about A.I.. From plagiarizing ideas to an actors likeness, AI is in the public eye and it is here to stay. Using A.I. in scientific research can be dangerous as we don't fully understand the damage it could do.

00:00:25:07 - 00:00:58:07

Clare

Could AI introduce bias into a study or stunt scientific progress? But could it also be a tool that is too useful to miss out on? It's a minefield so I brought on the expertise of Niamh Tumelty and Andrew Page to discuss the ethics and practicalities of using AI in research and beyond, something they cover in their thought provoking editorial 'Navigating the AI frontier: Ethical Considerations and Best Practices in Microbial Genomics Research published in Microbial Genomics.

00:00:58:09 - 00:01:11:17

Clare

So, yeah. Thank you so much for doing this. I'm very excited to talk about it. I think an AI is definitely something that's a hot topic at the moment for sure, but I suppose first things first is are you able to be introduce yourself?

00:01:11:19 - 00:01:35:11

Andrew

Yeah, I am Andrew Page and I work for Theiagen genomics. Yeah, I'm a computer scientist originally, but then I kind of fell into microbial bioinformatics and that's what I've been doing for past decade or so. Writing mathematics, applications for microbes and my Ph.D. was on that and machine learning. So it's it really is my area and I'm really excited that it's now come, you know, eventually.

00:01:35:13 - 00:01:58:05

Niamh

So I'm Niamh Tumelty . I'm the director of LSC Library, which includes being managing director of LSC press. And my previous role was as head of open research at the University of Cambridge. So there I was dealing across all the sciences as well. But my I'm coming this to this more with the interest in the impacts on publishing, the impacts on information literacy, critical appraisal.

00:01:58:05 - 00:02:03:24

Niamh

And what does all of this mean for what support, research services and libraries should be providing.

00:02:04:01 - 00:02:12:02

Clare

Really interesting. So yeah, we're here to talk about your paper that you published with us. Are you able to tell me a little bit about your recently published paper?

00:02:12:04 - 00:02:33:15

Niamh

Well, I suppose the first thing to say is that it wasn't a research paper as a guest editorial, so it should be read in that light, since it's very much an overview, a few paragraphs to provoke thought. That was the aim. And then is Chachi t to generate the actual have I generated part of the editorial.

00:02:33:16 - 00:03:05:23

Andrew

So the background to it is that we were in I'd set up a hackathon in Cambridge, had to go along just before a BHM applied Mathematics Book of Microbiology. And so we were all sitting in a room for a few days and everyone was, you know, really into AI and C and saying and then just at the end of it, we're like, well, maybe we could get chatbots to actually, you know, tell us what the ethics are around using it because it is a huge question.

00:03:05:23 - 00:03:33:09

Andrew

No one really knows what the deal is and how to handle AI. And so we got chatbots to then go and write its own editorial on the ethics of using A.I. generally content in publications and whatnot, because it's, you know, we can see the power of it and it's you can't get away from it, you know, it is there and everyone is using it from, you know, little kids for homework all the way up to, you know, professors.

00:03:33:11 - 00:03:44:06

Clare

Yes. You talk about the ethics of AI surrounding like microbial genomics specifically. How do you think that kind of differs to the more general concept of, you know, ethics of AI?

00:03:44:08 - 00:04:05:13

Andrew

I guess in our domain, a lot of our work is using public health, and now it is getting more and more into the clinical space. So it can be quite dangerous if everything you've based it on is a hallucination from an A.I.. So you have to be very careful because it can be used to make real decisions on public policy or on for clinical decisions in real human beings.

00:04:05:15 - 00:04:07:14

Andrew

So we have to be very careful.

00:04:07:16 - 00:04:28:20

Niamh

And I think it's really interesting because in the content that was generated by Chachi, Pati, it didn't pick up on things like that at all. It also didn't pick up on things like it talks about the risk of reuse and plagiarized content without considering the fact that in itself it's plagiarism because it's not your own thoughts. So it was it was quite interesting.

00:04:28:23 - 00:04:44:23

Niamh

We deliberately didn't critique what it came out in the editorial because we wanted the people reading to critique it and have a bit of discussion. But but definitely there were gaps in its own interpretation of what the implications should be in microbial genomics. It didn't touch on that at all.

00:04:45:00 - 00:05:06:08

Andrew

No, I guess it's a hard area to to delve into because we don't know the answers. And so it hasn't been trained on all of this stuff already. So I think it's going to take a long time and like people be using for a long time before we catch up with the kind of ethics and how it should be used and what we should do, but as how it should be referenced and things that at the moment it's just free for all.

00:05:06:10 - 00:05:25:16

Clare

Yeah, yeah. A bit of a Wild West I think with AI at the moment and yeah, completely agree. I think sometimes as well with especially things like on the internet for example, the speed of development

is so quick and then perhaps maybe things like laws and policy don't take as long as take a lot longer to kind of catch up.

00:05:25:18 - 00:05:38:11

Clare

And so just for everybody listening, so do those elements of the editorial that are generated by chatbots. Is that all of it? Or if you whittle it down, how does that work?

00:05:38:13 - 00:06:00:03

Niamh

The way we approached it was to have some opening paragraphs that were clearly labeled as human generated content. And then there is a stage I had in Cold Air, this generated editorial. And so everything from that point onwards was automatically generated. There was no editing or restructuring at all as that section was there.

00:06:00:03 - 00:06:16:10

Andrew

Entry that it was just copy editing, you know, to make the headings look nice. That's absolutely. Yes. And we left it serious, you know? So if I made a mistake, then, you know, it's not perfect. There are bits that are that we've identified that, you know, are what we would have said. But, you know, that is how it is.

00:06:16:12 - 00:06:20:06

Andrew

But it's it's quite close and is quite self-reflective, which is airy.

00:06:20:11 - 00:06:46:12

Clare

Yeah. Yeah. And what's kind of worrying sometimes is I think AI's getting surprisingly good a lot of things and we'll talk about your podcast in a moment because you listen to that and this is very obviously generated, but there are some elements where it's difficult to discern between what is human made and what is I made, and I suppose that's one of the ethical considerations so forward.

00:06:46:14 - 00:07:12:08

Andrew

Yeah, I know there's going to be a deluge of information coming out over the next little while, you know, because anyone can go and give a small amount, small prompt and then get a huge amount of text on. What you're going to find is that the average post-doc, a PhD student, is there instead of from one paper a year, might have, you know, five papers a year if they can just churn out all that kind of boilerplate stuff and just getting through that sea of information is going to be a pain.

00:07:12:14 - 00:07:38:23

Andrew

And even on the air generated podcast that we're going to discuss later, I actually generate another podcast in the hackathon. I wrote a script or wrote our chat CBT work, a script to take in any microbial mathematics to you, just give it to name and then it'll generate a script for you and it'll generate the the cover to a dolly, which is another air generated image generator and the title as well as a podcast.

00:07:39:00 - 00:08:01:03

Andrew

And then, you know, it just puts it into an upload to the hosting platform. And you know, within a few minutes I had lots of episodes all hour generated. I didn't have time to read them, you know, like they're churned out so quickly. And that's the feature we have, you know, because these were done and read out by voices with saying, you know, they write 90% similar to a real voice.

00:08:01:05 - 00:08:08:02

Andrew

And it can take a while to realize, well, you know what they are. So that's the future. You know, the tidal wave of content is coming at us.

00:08:08:04 - 00:08:32:05

Niamh

Given that in librarianship, I should say probably for those because this isn't a librarian audience, I've librarianship as being an information profession. It is about managing information and then connecting it with the people that need it in whatever discipline they're studying. And when I was doing my library masters, we were learning about information overload and that this this tidal wave of information we already had 15 years ago.

00:08:32:05 - 00:08:56:11

Niamh

So if this is going to massively exacerbate that problem, it's going to be a real challenge and a real challenge for publishing, because I think there are pros and cons like Elizabeth Beck has been able to make use of AI to identify a lot more of the problematic images from from papers than she she could do previously. So there are good things in terms of being able to use it to detect problems.

00:08:56:13 - 00:09:17:19

Niamh

But there are also challenges because if you can, as Andrew says, just roll out a new paper in a few minutes almost with chatty message doing most of the work. We don't have enough peer reviewers. The publishing platforms can't cope with what they've already got. It's already a broken system. How on earth is it going to cope with all that's going to come now?

00:09:17:19 - 00:09:19:05

Niamh

It's it's a real challenge.

00:09:19:07 - 00:09:44:17

Andrew

Well, how soon are we going to have peer reviewers? You know, if we can find them, then we're probably going to get them popping up, you know, particularly to the journal standards. And that's going to be a challenge, you know, because just for as a joke, I put in, you know, critically, you know, evaluate this paper and one of my papers and, you know, basically tear to shreds and be.

00:09:44:17 - 00:10:06:08

Andrew

REVIEWER three And it did a very good job. It wasn't accurate, but it did a very good job of, you know, like absolutely destroying the three bits. You could very easily get people, you know, being lazy, maybe reviewers didn't themselves or you might get journals, you know, thinking actually this is a reasonable way to air. Very quickly.

00:10:06:10 - 00:10:08:04

Niamh

Your first case at least, I guess.

00:10:08:08 - 00:10:35:19

Clare

Yeah, yeah. I suppose it's the knowing that it's happening. I is definitely the first port of call, isn't it. Is knowing that it's going to be read by an AI is definitely something that needs to be, needs to be made clear and that, that kind of brings me on to what I was going to ask you. There were I think I was on your Twitter and you summarized one of your papers, this review potentially and an AI generated tweet came up.

00:10:35:19 - 00:10:58:18

Clare

And so Twitter from this and a lot of my work is summarizing papers. So I was like, wow, I think that's going to save me. Could potentially save me loads of time. But how secure are you in knowing the AI is then correct and has lots of people interpret papers in so many different ways and what people think is important changes.

00:10:58:20 - 00:11:22:12

Andrew

So touch your beauty has all the CC by papers from Pokemon right up until 2021. So you can ask about any paper, this one published relatively recently. So that's basically everything. The engine. Yeah. And it'll give you a reasonable summary like a really, really, really good summary. I asked to summarize paper I wrote in 2015 and then and considered all the other people have cited in that context.

00:11:22:14 - 00:11:45:10

Andrew

And then it gave me things that I hadn't even thought about, you know, as the use cases or, you know, benefits and whatnot of this particular piece of software written, which is kind of mind. So that's really insightful. And I've used it for summarizing papers as well know. Obviously it's a very easy thing to do, you know, be based in text and it gives you a small summary and it's going to change a lot of things.

00:11:45:10 - 00:12:07:14

Andrew

It's mostly correct. So where I find an incorrect is a you ask it to summarize something that is a formerly published and I will struggle to associate the correct authors or institutions, you know, because it kind of hallucinated slightly. It's mostly correct and it'll be people in right domain, but it won't be the actual people necessarily. So you have to be careful around facts.

00:12:07:16 - 00:12:12:19

Andrew

Yeah, but it looks confidently correct. It's confident, only incorrect.

00:12:12:21 - 00:12:38:07

Niamh

But I think that's what's dangerous about it is that it's also plausible when you reading I but it's not necessarily correct at all yet which is where a lot of universities are worrying about how to handle this in terms of academic misconduct situations and that sort of thing. And and actually at the moment it's so bad reference referencing that it should be fairly easy in a lot of cases to stop.

00:12:38:07 - 00:12:56:01

Niamh

Actually, that's not a real reference. So that you can it will even generate the data, but you click on it, it brings you to something totally unrelated. So at the moment that's fairly easy to spot. I think the question will be, as Andrew says, it's going to get better and better. Yeah. What's it going to be like in five years time?

00:12:56:05 - 00:13:10:00

Clare

Stage though at the stage as it is at the moment, you need this critical eye to be able to spot where the mistakes are and to be able to be able to use it effectively. You still need to have that background of yes, knowledge.

00:13:10:06 - 00:13:36:09

Niamh

Yeah, but also I would add, I've always been banging on about critical appraisal anyway. So I mean, there are examples in Lancet of papers that were clearly fabricated data that that led to. I suppose I'm thinking about the Wakefield paper and the implications on vaccination anti-vax campaigns and so on. And there are lots of examples of good papers and good venues that turned out not to be good at all.

00:13:36:14 - 00:14:01:18

Niamh

So I think that Critical Eye has always been needed. Yeah, I guess it may be a good thing if it gets people tempered, because I think people do like to take shortcuts. They like to go, Oh, that's a

famous journal and therefore I'm going to trust us. Search Actually, they never should have done. But if this sort of thing means people become more aware that they need to be super critical of anything that reading, I think that's a good thing.

00:14:01:20 - 00:14:03:13

Clare

Really excellent point. Yeah.

00:14:03:15 - 00:14:27:06

Andrew

But it's getting better and better and better all the time. And we're only at the very beginning of this wave and in six months time it could be ten times better as especially if it has access to live data and the internet and our memory and and that's going to be scary because it will be able to give you much more convincing facts, which may not be real facts, but they'll look correct.

00:14:27:06 - 00:14:49:02

Andrew

And the URLs will will seem correct and things like that. So it's going to be dangerous and it'll be harder to spot as well. You know, at the moment, you can you can kind of figure out the pattern and, you know, there's a bit of a pattern to how it says, say, summarization. When I read you can you can spot us occasionally or if it's like say us versions of spellings or phrases and things like that.

00:14:49:05 - 00:14:53:13

Andrew

You know, it's interesting sometimes, but it's going to get hard.

00:14:53:15 - 00:15:08:00

Clare

And I suppose to bring it back, I guess. Where do you foresee I achieved these kinds of softwares? Where do you see them coming in to microbial genomics research? Why would the software be useful?

00:15:08:02 - 00:15:32:10

Andrew

So I use a lot for coding applications and it is phenomenally useful. So I start off with a Python script. I'll write a descriptive out of text so the very top of the file saying what I wanted to do and kind of laying eyes at these and emphases efforts and very descriptively saying what is going to happen and then it goes and generates kind of the skeleton in the first pass.

00:15:32:10 - 00:16:02:22

Andrew

And that will save me, you know, huge amount of work. It probably speeds up my coding of about 20%. And it means that I, you know, it's easier to generate things. I don't have to, you know, go and Google stuff and go to StackOverflow and think, oh, how do I do this? I do use this library. It gives you the template is not always correct because things change, but it's mostly correct and it gets in the right ballpark or and a lot of what you do in your program, you know, as a human, you make mistakes, you make typos.

00:16:02:24 - 00:16:25:08

Andrew

This will get it correct first time. So you're kind of skipping over that stepping until it to make tests for you so you can tell it to put in common. So this guy in Australia, one time, he went and did an application called right there. He's at an M.D. in in Melbourne. And basically what you do is you give up his sovereign rights.

00:16:25:08 - 00:16:46:17

Andrew

The Commons writes the docs for you and in a structured manner as they should be done. And so that means your code is and well counted and something written in and taken. But you can just pass an entire repository of mathematics software and that generates a lot for you. So like you can actually greatly enhance what has already been produced, which is kind of cool.

00:16:46:20 - 00:17:04:00

Andrew

So I'm hopeful for the future that it will be used everywhere and all the way from coding to let reviews to improving papers and proving English actually to help people who don't have English as a first language to rewrite stuff. You know, they've already written, you know, correct mistakes.

00:17:04:02 - 00:17:32:05

Clare

Wow. Interesting. Okay. And so chat DVT runs and so I software runs through very much a code following patterns, following rules, following knowledge. Do you think, though, that there's an element of space for subjectivity and kind of creative thought within science and could could these types of APIs offer bridge that gap? Do you think they could ever get there?

00:17:32:07 - 00:17:56:12

Niamh

That's an interesting question. I, I have first of all, the easy the easy question. Absolutely. Though I do believe that there is a certain amount of subjectivity, but then that's probably my social science background. So it's very and could I ever bridge that gap? I guess the leap they've made already, it's not inconceivable that they could make that leap in future.

00:17:56:12 - 00:17:57:14

Niamh

I don't think they can do it now.

00:17:57:14 - 00:18:25:00

Andrew

Well, I see there many in different ways. They're running software and different styles and it is kind of an art form. And even though there is set ways to do things or like set protocols in the lab, there is a lot of creativity within us to do things, to modify things. And that's where just chipped in these large language models will fall down because they will necessarily have gaps, skill builds and, you know, don't know how to do something.

00:18:25:00 - 00:18:44:17

Andrew

ABC But they won't realize that, oh, actually maybe if you varied in slightly or in the real world, you know, you pick a competition, do this sort of as bubbles or you know, these that are kind of minor little things that happen and it won't necessarily understand and so can't then produce better solutions. All it can do is look at what's happened before.

00:18:44:19 - 00:19:05:19

Andrew

So I think the creativity steps, a lot of those will stay purely in humans. But what it will allow is for a human to be like the conductor of an orchestra and to, you know, rather just being a musician within the orchestra and take a much higher level role and then produce work faster and quicker and bring things together.

00:19:05:19 - 00:19:08:02

Andrew

So actually it's going to accelerate science quite a bit.

00:19:08:04 - 00:19:28:18

Clare

Yeah, Yeah, that we can agree on that point for sure. When I speak to my colleagues about that first step, it is that is doing a part of something that's your job that you're getting paid for. And now there's something that that's a part of your job that's going to be generated probably purely from like a perspective of people being in work.

00:19:28:18 - 00:19:41:05

Clare

And, you know, there may be elements of work in the lab, for example, where it would be done by an assistant. But they're learning whilst they're doing it. For example, what are your kind of thought processes there?

00:19:41:07 - 00:20:03:17

Andrew

I do a lot of work in the pandemic on genome sequencing of SARS-CoV-2, and you had a lot of labs where they bought one of every possible robots and they have, you know, vast quantities of money, and yet they're struggling with just integrating all those different machines and making the processes work. And they're having to, you know, take a USB key from one place to another to plug in this computer, to plug in something else.

00:20:03:19 - 00:20:25:12

Andrew

And it meant that they, you know, the staff were vastly under utilized, whereas in my lab, in the courtroom institute, we had basically if we need more capacity, we just employed more postdocs to do that. And so we were able to actually scale up much quicker and faster and respond to things and respond to things like different formats.

00:20:25:12 - 00:20:42:10

Andrew

You know, maybe something comes in and tubes versus plates or different types of plates and being able to respond to that work versus a very rigid workflow which is built for scale. But it takes so long to get there, you know, and refine and working. So yeah, we're not going to have a job.

00:20:42:12 - 00:21:05:23

Niamh

Well, and I think as well, it frees you up to do the more interesting aspects of the jobs and whether everybody is is skilled to do that. It's another issue. And there anybody involved in management needs to be thinking about that and how they bring people along if they're not there already. But if I think about the chronic problems in Haiti, I have yet to meet an academic that works a sensible number of hours per week.

00:21:06:00 - 00:21:15:01

Niamh

Yeah, I, I don't think running out of work is an issue. I think anything that's going to improve those were workload issues. It has to be a good thing.

00:21:15:03 - 00:21:25:10

Clare

And I suppose it's an output thing as well, isn't it? Uni may be working hopefully less hours, but a normal working be your output will be increased because it could be.

00:21:25:10 - 00:21:26:22

Niamh

Yeah, absolutely. Yeah.

00:21:27:02 - 00:21:30:02

Andrew

Or you're working crazy. Tomorrow is a week and you just have more outputs.

00:21:30:04 - 00:21:35:24

Niamh

Well, I really, I really think we have to fight back at the current culture of overworking and it's horrendous.

00:21:35:24 - 00:21:37:21

Clare

Yeah. Yeah, definitely.

00:21:37:23 - 00:21:59:05

Andrew

Certainly for podcasting I know I've, I take the transcripts that are produced by the podcast for my microphone to podcast and then I put them into GP and I tell it to summarize this and then that produces show notes which are very, very accurate. And then that gives a much more, you know, something I think on reads that somebody can listen to it, they can read most of what goes on.

00:21:59:07 - 00:22:18:03

Andrew

And then for, you know, search engines can find it more appropriately, whereas in the past, you know, that was just a chore. You'd have to pay someone even a year, go to the basement to go and do that, Transfer the description in checking it and making sure it's correct is just intro and terrible transcription and, you know, figures that I you know that what people are saying, what people are actually discussing is kind of good.

00:22:18:05 - 00:22:35:11

Clare

Yeah. Yeah. Now you've moved on perfectly. No, definitely if I had a good transcription so far at the moment I have to go in and correct it because it transcribes things wrong. So that would be great for me. So yeah, well I was able to tell me a little bit about your podcast.

00:22:35:13 - 00:22:59:02

Andrew

So we have two different podcasts myself and they've have research pages which is focused on I guess the computer science and then the librarianship and the open research coming together and just discussing about academics supporting academic research. I know the issues around that. And so what I did was one day, one weekend as, as annoying about I.

00:22:59:04 - 00:23:08:12

Niamh

It was Easter and he wanted me to be having conversations about what way I was going to apply I in my job and I know I am on holiday, talk to me in two days.

00:23:08:12 - 00:23:13:03

Andrew

So we're actually we are also married.

00:23:13:05 - 00:23:19:17

Clare

Showing up at your house. So how did it create that script then? What prompts did you give it? How does it work?

00:23:19:20 - 00:23:41:14

Andrew

I did not give it very many prompts. It was just something like I work in microgrid genomics research and I you know, I wanted to discuss the ethics of I am publishing and discovery research. And then I got it. I said, okay, write me a podcast episode for this particular podcast research pages with two hosts and give them the names.

00:23:41:16 - 00:24:20:17

Andrew

And then off it went well. And you know, sometimes you have to kind of directors and say, I need 3000 words or 1000 words, and there are limits on what you can put in and get out. Those limits are increasing all the time. Actually, only last week they went from 4000 tokens up to 16,000 tokens, which is a staggering increase of 4000 basically words to 16,000 words in his memory, which means they can very easily write saying something that's the length of a book chapter, you know, and while feeding and all that information and yeah so no we we generate a podcast I also a different podcast called the micro Benefit Podcast.

00:24:20:17 - 00:24:47:19

Andrew

So that's the Microbial Informatics podcast that I co-hosted with the people who come from the Quantum Institute and Lucasfilm, CDC and again, we are, you know, super focused more on the technical end of mathematics and GP tape. But you know, we have like four episodes coming out now on Chartbeat because that's what everyone in our community is talking about and using and putting into every tool they can possibly think about and using it for papers and using it for governance.

00:24:47:19 - 00:24:53:23

Andrew

And as was some of them are, I presume, were it or acknowledging it, let's say some art.

00:24:54:00 - 00:25:10:18

Clare

That sounds amazing. Well, I think my immediate reaction to that is that the thing that I love about podcasting is this human to human interaction is there, and that is just completely by fives. Three is a cool thing that you've done that is very exciting.

00:25:10:20 - 00:25:17:14

Niamh

I don't think we'd be wanting to do that again. That was just an exciting treaty and a bit of a play for us.

00:25:17:16 - 00:25:33:16

Andrew

But it's good for you know, give me an outline, you know, give it a topic or actually give me topics to discuss and then give me an outline of the podcast and you know, it can break it down bullet points, which is kind of a nice thing sometimes. Just arranging information.

00:25:33:18 - 00:25:52:12

Niamh

Yeah, Yeah. But I completely agree with you that the, the real value of podcasting is the conversational flow between two human beings or more and yeah. So I don't think, I don't think that's been achieved by us. I think it was a bit of fun.

00:25:52:14 - 00:26:04:11

Andrew

But will the human to human podcasts of the future just be like the artisanal mugs that you've gotten, you know, handmade offering versus the mass produced, you know, stuff made overseas?

00:26:04:16 - 00:26:13:19

Niamh

Well, I know which one I choose, and I can't even keep up with the podcasts that are human to human already that I want to listen to. So I don't think I could be listening to the air generated ones.

00:26:13:21 - 00:26:33:21

Clare

So excellent analogy there. I guess I'm getting involved. Oh, amazing. Yeah. I mean, it would have saved me a lot of my prep time and everything. So there you go. Perhaps in a little bit more kind of on to the more A.I. ethics. You mentioned earlier about plagiarism. Where do you see that going? What are your kind of top issues?

00:26:33:21 - 00:26:51:10

Niamh

It's really yeah, it's a really interesting question. So I'm not working as directly with this anymore as I used to, but I know a lot of people are putting a lot of thought into, well, what does this mean for how people should be citing, how people should be clearly labeling what their what their what was their work on, what was the work of others.

00:26:51:12 - 00:27:16:00

Niamh

And and I mentioned the fact that Chatty Pete said that the agent at the A.I. generated content may inadvertently reproduce plagiarized material. And that's what I thought was the problem. But I'm looking at it thinking the fact that this is not generated by the person is already I mean, does that count as plagiarism? Plagiarism is taking the thoughts of other people.

00:27:16:02 - 00:27:38:02

Niamh

A.I. is not a person to be counted as plagiarism. Do we kind of like what? What is this? I mean, we definitely have to label these things clearly and explain how things were used so that it's so that people's work can be appropriately evaluated. Yeah, but. But right now I think that that's that's the question. It's I think it's being defined at the moment.

00:27:38:02 - 00:27:51:12

Niamh

And I think every single university in the country is trying to have this conversation and probably every publisher as well about how do we approach this problem. And I don't think there's consensus on this at all yet because it's all just come out of nowhere, hasn't it?

00:27:51:14 - 00:28:12:14

Andrew

Absolutely. And actually, I originally for this editorial project, GPT, then as an author, I'm an instructor facing are they should they be authors, should they not be? It's true it was removed by the editorial office and I don't know if I fully agree with that, but I would kept checking in as an author because, you know, they.

00:28:12:16 - 00:28:16:23

Niamh

They all say two thirds of the paper doesn't. Exactly.

00:28:17:00 - 00:28:45:11

Clare

That's interesting. I there's yeah there's the twofold sort of side of it since using CBT and not signing out of law. And then there's also this generated content specifically from this kind of concept as well as like of art as well. But my kind of argument from that side would be if we're not just amalgamations of everything we've read, everything we've created, anything we've looked at, isn't that just what GPT is also doing?

00:28:45:11 - 00:28:55:11

Clare

Absolutely, yeah, yeah, yeah. It's mostly minds held at the moment. Chat CBT is run by. Is it Mike who runs Chachi?

00:28:55:11 - 00:29:21:12

Andrew

Pete It is Openai who started off as a nonprofit. Then they moved to a fixed account profits and they are half owned by Microsoft and they are the least open company I've ever come across, which has the word open and no one knows that is trained on and they refuse to tell anyone because I think they're terrified of being sued.

00:29:21:14 - 00:29:35:11

Andrew

And you have open models where they are totally open about word are training sets are coming from and they are facing legal action left, right and center. So I can see why they're not releasing any information, but they're not open in any way, shape or form.

00:29:35:17 - 00:29:51:23

Clare

Yeah, well, I mean that. Yeah, that perfectly phrased my question. I my question is about data privacy. Who owns if we rely so heavily on AI to do our jobs? And then it goes what what what future do you see there? Well, I.

00:29:51:23 - 00:30:15:07

Niamh

Guess one thing to be aware of is a huge number of companies are banning the use of chatbot because of the risk of people putting commercially sensitive data in to us, and then anybody would be able to pick it up because chatbot could then present it to somebody else as part of their solution to their problem. And and then suddenly they've got no control of their own information anymore.

00:30:15:07 - 00:30:22:00

Niamh

So yeah, that is something people are worrying about already from that angle. But I don't know if you wanted to say from a different angle.

00:30:22:00 - 00:30:24:04

Andrew

Well, I love it. I mean, I.

00:30:24:06 - 00:30:25:13

Niamh

Really.

00:30:25:15 - 00:30:57:04

Andrew

Do love my friends. I think you range like a viva. And so I put in the email trail into techy beauty and as I got like two answers with these points and then it produced a beautiful answer, referencing everything that was in a previous thread, you know, perfectly interleaving it perfectly given the context. Right? And I was like, Wow, you know, this this kind of if I were to take me 20 minutes twice because it's very long and detailed and it's just, you know, you can give a few points and it makes it and yeah, I think, I think it's fantastic.

00:30:57:04 - 00:31:17:01

Andrew

And similarly, like when you go and you put in maybe drafts of papers that's not published just and if you tell it to expand upon a rewrite or whatever, there is a risk that that might lead chaos at the other side. But at the same time, I guess a lot of what I do is open or everything about it is open anyway, and it's going to be published eventually.

00:31:17:01 - 00:31:41:10

Andrew

So if it leaks, I had a few minutes earlier, a few days earlier, and so what? But I can say for commercially sensitive stuff, if you're working on the stuff that's patentable or whatever, you don't necessarily wants to get it around. There is a lot of new models coming out. This has sparked a whole new area. You know, now it's everyone is pumping billions into it and those some of them will work offline and that's going to be a big thing.

00:31:41:10 - 00:32:05:19

Andrew

You know, if in your phone they can run on a model or if you can run it on your own internal stuff and keep everything internal like Amazon are doing that they they're or they claim to have that they have specialist ships and you can spin up a virtual machine and then you can have a pre-built, you know, base layer language model and then you put your data on top of your company safe and you keep it private.

00:32:05:21 - 00:32:15:03

Andrew

That's sounds like a really good way to do it. I'm sure a lot of companies would go down that route where they can just feed in everything in their entire company, dump it in, and then off you go.

00:32:15:05 - 00:32:39:10

Niamh

Well, interesting solution to the whole problem of knowledge management and knowledge transfer, which is a real, real issue for most companies at the moment. I've had a lot of interesting conversations, actually, specifically with engineering companies around this challenge of how do we learn from past mistakes. You know, people remember for maybe 3 to 5 years, Oh, don't do that because it burned such and such when they tried it that way.

00:32:39:12 - 00:32:52:17

Niamh

But then seven, eight years ago, somebody comes along, makes the same mistake because nobody remembers that happened before. So I can really see some interesting implications on that side of things. But learning organization, knowledge management type side of things.

00:32:52:20 - 00:33:21:09

Andrew

So I remember a few years ago as a project from King's On called COG Stack, and it was basically natural language processing of NHS data because a lot of patient records, you'll be horrified to hear this, you know, or handwritten or they're in 20 different databases. And then if you, for research, want to collect specific patients with specific criteria, it can be very difficult to do or even to go them or to identify, you know, markers of where they maybe be.

00:33:21:11 - 00:33:44:00

Andrew

Those the population there is actually subjected to a higher risk of particular disease developing. And, you know, so there is some really good use cases for this. And on the second wave, if they applied this kind of data to it or these kind of models that they could share, which I shot inside the NHS could really be a much better resource for for research in that regard.

00:33:44:06 - 00:34:03:19

Andrew

You know, if you could link up those 50 different database like Journey and COVID, we had to have a team of people just doing metadata and pulling things together from different databases, handwritten notes, spreadsheets, you name it. And as just to get enough data for surveillance to give to the UK, as you say, which is insane. Like you shouldn't need that in this day and age.

00:34:03:19 - 00:34:09:07

Andrew

But you know, maybe and I can do a little bit better by linking things up.

00:34:09:09 - 00:34:35:07

Clare

And really interesting. But I suppose the it's not great. The Black Mirror is many seasons just come out because all I'm thinking is the whole time is just a bit of a worrying. You don't know what they're doing with your data and your you're feeding it with. So much information. Yeah. And again, like we live, like we said earlier, is it's going to take a while for regulation and law to kind of keep us sort of safer on that side safe as they can keep us safe.

00:34:35:09 - 00:34:40:02

Clare

Yes, I'm still not 100% convinced, but I do completely get where you're coming from. And I'd also.

00:34:40:08 - 00:35:02:07

Niamh

Argue, though, that we've been feeding Facebook, Google and all these companies way too much already. Yeah. So that's one that it's it's really difficult. It's really I resisted it as long as I could, but it got to the stage where you couldn't there were so many things that you literally could not sign your child up for such and such a camp unless you had a Facebook account.

00:35:02:07 - 00:35:28:24

Niamh

There's it's really so pervasive now. It's pretty much impossible to protect yourselves from these companies. And I'm not saying we should give up, but I agree that this issue of the regulation and trying to get it right needs to be tackled. I haven't been following it closely, but I have seen some criticism that some of the governance that's being shaped around AI appears to be being shaped by these big companies that have their interests that are not our interests.

00:35:29:01 - 00:35:34:03

Niamh

So I'm not following it closely. So I'm not an expert on that. But yes, I agree.

00:35:34:03 - 00:35:59:05

Andrew

It's very you know, it's really terrifying. Like open air activity was trained on Reddit and Twitter. These are toxic, toxic places. And there have been many examples throughout history of recent history of AI bots becoming racist and becoming just right wing extremists and all this kind of stuff very, very quickly, presumably because our training sets are based on very vocal toxic people.

00:35:59:07 - 00:36:16:11

Clare

Yeah, there's a whole kind of waves of AI in the wrong hands. There's this kind of thing as well. It's interesting, your point is about having to buy into it. That could very easily happen with I if you're in an office and everybody else is using AI to process AI data and you're not and you're going to be ultimately behind.

00:36:16:11 - 00:36:17:11

Niamh

Yeah, Yeah, exactly.

00:36:17:11 - 00:36:38:10

Clare

Absolutely. Yeah, that's right. And this is my last question, actually. So I was really surprised to see that there's this idea of AI given the benefits or of A.I. or said about promoting collaboration that's really shocked by. Yeah. Can you tell me about that and what your thoughts are on.

00:36:38:15 - 00:37:03:06

Niamh

Well, so I mean, again, this was in the section that was generated by. Yeah, but I think I think it's true. If you take that example you gave earlier in the conversation, Andrew, where you got it to look at what you worked out on, it found applications that had not occurred to you at all. You can see how if it if it throws up, oh, actually there is a link with what people are doing in this totally unrelated field.

00:37:03:12 - 00:37:21:07

Niamh

It could be a good opportunity to then go, Well, maybe I should talk to such and such a person that I know works in that field and see if there is opportunity to follow that. And I hadn't considered before. But I mean, I should probably say we don't have any attachment to the AI generated content. Editorial at all.

00:37:21:07 - 00:37:27:08

Niamh

It is all intended to provoke discussion. It's not that we believe what it does that at all.

00:37:27:10 - 00:37:38:06

Clare

Yeah, of course looks but what a great discussion that was then. I was very much into enjoyed this. Is there anything that you particularly wanted to bring to the table to to discuss?

00:37:38:08 - 00:37:41:11

Niamh

I think we've covered everything really got a great conversation.

00:37:41:13 - 00:38:20:20

Clare

Yeah. Some really interesting. I'm still not quite there though. Well I'm definitely more on the side of AI now after that button. Andrew whatever your feelings towards, I hope that this podcast has sparked conversation, if you'd like to read needs Andrew's editorial and you can find it linked in the description below. Even listening to micro talk, if you like this episode, please share with your friends and colleagues or leave a like or comment wherever you're listening.