Welcome to the OpenAI podcast, the podcast that opens up the world of AI in a quick and concise manner.

Tune in daily to hear the latest news and breakthroughs in the rapidly evolving world of artificial intelligence.

If you've been following the podcast for a while, you'll know that over the last six months I've been working on a stealth AI startup.

Of the hundreds of projects I've covered, this is the one that I believe has the greatest potential, so today I'm excited to announce AIBOX.

AIBOX is a no-code AI app building platform paired with the App Store for AI that lets you monetize your AI tools.

The platform lets you build apps by linking together AI models like chatGPT, mid-journey, and 11Labs.

Eventually, we'll integrate with software like Gmail, Trello, and Salesforce so you can use AI to automate every function in your organization.

To get notified when we launch and be one of the first to build on the platform, you can join the waitlist at AIBOX.AI, the link is in the show notes.

We are currently raising a seed round of funding.

If you're an investor that is focused on disruptive tech, I'd love to tell you more about the platform.

You can reach out to me at jaden at AIBOX.AI, I'll leave that email in the show notes.

So really what's happening here, I guess the headline is that researchers have developed a neural network to detect operator fatigue and they're doing this using IVE movement.

So in a collaborative effort to enhance operational safety, researchers from St. Petersburg University and St. Petersburg Federal Research Center at the Russian Academy of Science have developed a comprehensive database of IVE movement strategies.

So this data actually aims to inform neural network modules designed to monitor the psychological states of individuals working in various critical roles such as vehicle fleet drivers, air traffic controllers, and industrial plant operators.

So the first thing I want to mention here is really when they're talking about this research of why they're doing it, they're like, look, this is for individuals in really critical roles where nothing can go wrong, air traffic control.

You cannot have an air traffic controller getting sleepy and missing the mark.

There's all sorts of terrible things that can happen.

Now at the beginning of this podcast, in the intro, I alluded to the fact that this could be used for advertising in other areas.

While that may have been a little bit of a stretch, because really how this technology works is by monitoring your iris and by monitoring your eye, I think that it's still not that far off that that could be a place where this gets to.

A lot of times you're on your phone using your phone and the camera is activated or you give camera access to TikTok or you give Instagram access to your camera, you give all sorts of apps access to your camera that theoretically could be on and tracking you, or maybe when you upload a video that's like a camera based video to a social media platform, TikTok, Instagram, Facebook, X, whatever, let's say it knows that you actually did the recording.

So for example, on TikTok, you can be recording a video on TikTok, it sees your eyes on there. So there is a case to be made that even a lot of different apps that you wouldn't really think about or expect when you're uploading a TikTok video, TikTok could literally be tracking and detecting if they think you're tired at that very moment.

So not saying that everyone's doing this or this may be like a big huge invasion of privacy thing that's immediately happening, but the fact that it's possible, you have to discuss the implications of something that's possible because inevitably, whether it's a bad actor or someone claiming to do it for safety, it will get embedded into stuff.

If it's possible, people will do it.

So that's all I'm saying.

I'm not saying that TikTok and Facebook are going to be spying on you and turning on your camera when you're not expecting it and seeing how tired you are or your laptop company, but also think about the fact that there is a big prevalent problem, which is obviously made known by the fact that a lot of modern laptops you buy today have a manual hard shutter to cover your camera because people hack into cameras all the time.

You can download a piece of software that has access to your camera, theoretically something like Zoom that needs access to your camera for video calling, could also be hacked into and secretly access your camera when you don't know, and a lot of people feel like this is a major invasion of privacy, so you can go on Amazon and buy these little slider window shutters that go on top of your camera lens on your laptop to manually cover it with a piece of plastic, and this is so popular to the point that a lot of really modern Windows laptops I've seen, some of the newest ones coming out, literally have hard built in camera lens covers, so obviously they're doing this for a reason.

People can hack into your camera, and so whether it's your phone or whether it's your laptop and you're worried about exploitation, imagine if someone was hacking into your laptop, seeing that you're running this technology through your camera on you to see that you are tired, and then maybe that's when scammers go and try to give you a scam call because they know you're more likely to fall for something or become a victim if you are sleep deprived and you're not functioning at your full potential, so there's the whole spiel about how this can be used for bad, I try to always give that for every AI advancement, but there's definitely some ways this can be used for good, so let's jump back into the research.

The research team utilized a multifaceted approach, essentially they were capturing a range of behavioral and neuropsychological indicators to offer a more comprehensive understanding of operator states, so whether they are tired or alert, the research findings were published in the Scientific Journal Sensor, so Irina Soshina, who's the director of biological sciences and the professor at the Institute of Cognitive Research at St. Petersburg State University, emphasized the advantages of an integrated methodology, she noted, quote, an integrated approach provides a more complete picture and a more objective assessment of the functional state, so in contrast to approaches involving separate registrations of certain indicators that reflect the state of fatigue, Satoshi pointed out really kind of the limitations of current methods like cardiac time revival measures, which are often considered unreliable indicators of fatigue levels, that's currently what we use a lot of the time, and instead

of kind of this research focused on a unique approach involving eye movement, which are believed to accurately portray the interplay between neural networks of static and dynamic vision and psychological indicators, so this is really, really interesting, they're literally looking at your eye movements, running a neural net, and they're able to predict how tired you are just from your eye movements, which is interesting because they don't need to see anything else about you, just your eyes, and if you think about it, your phone and your laptop camera are almost always going to be pointed in a place where they can see your eyes, whether they can see the rest of you or not, so anything that could get access to that camera could pretty much tell when you're tired or not tired, and they just have information on you based off of that, so I think the researchers have made their comprehensive database publicly available, and they're encouraging software developers to leverage the data to improve their own systems, they said, quote, we have developed a comprehensive database suited for training neural networks that classify a person's state of as tired or alert, that was Alex Kurnitskyev, and that's a senior research associate in the laboratory of integrated automation systems at the St. Petersburg Federal Research Facility at the Russian Academy of Science. The data collected for the study was really robust, incorporating various sensors, including video, camera, eye trackers, heart rate monitors, and electro-cento-phenographs. The operators were also assessed for other factors such as sleep quality, fatigue, and complex visual motor reactions, so the data collection took place at multiple times during the day, morning, afternoon, and evening to capture a broad spectrum of operator conditions, and the research spanned eight days and included 10 participants engaging in a mix of passive and active tasks such as reading and playing Tetris. The entire process was video recorded for further analysis, I think that's a great move on their part, if people see holes in the way that stuff was trained, you know, maybe they'll be like, well, it's just predicting that someone's tired because the lighting's darker or something, although I'm sure it's just in a laboratory with the exact same lighting, but you know, that kind of thing, the whole thing has been recorded, and by adopting a multi-dimensional approach and making the data publicly available, I think the research holds the promise of advancing the field of neural network-based fatigue detection systems, so this in turn could significantly bolster safety protocols across various transport industries and defense sectors, that's what they're saying in any way. I see something slightly different, and I see the fact that if they're open sourcing this and giving it away to everyone, great time for hackers and scammers to grab it and use it for bad, but you know, it'll inevitably hopefully be used for good as well, so just take it with a grain of salt and know that this exists, so keep that on your radar as there are some very interesting implications, I believe, with this technology.

If you're looking for an innovative and creative community of people using ChatGPT, you need to join our ChatGPT Creators community. I'll drop a link in the description to this podcast. We'd love to see you there where we share tips and tricks of what is working in ChatGPT. It's a lot easier than a podcast as you can see screenshots, you can share and comment on things that are currently working, so if this sounds interesting to you, check out the link in the comment, we'd love to have you in the community.

Thanks for joining me on the Open AI podcast. It would mean the world to me if you would rate this podcast wherever you listen to your podcasts, and I'll see you tomorrow.

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