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TOPIC: Bioterrorism

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Bioterrorism Recent Updates

With the development of new technology and the advancement of artificial intelligence, many new possibilities for saving lives in the medical field have been introduced. But, the potential for good in this new developing sector can easily evolve into bioweaponry and dangerous chemicals with the flip of a virtual switch.

For example, emerging cheap and accessible biological tools have accounted for the creation of the iGEM competition¹. This is an artificial intelligence competition where amateur scientists compete with one another in order to build biological systems and operate them in living cells. While this is intended to be a fun competition for students, the iGEM is a primary example of the improvements in technology that allow for greater opportunity and the potential to misuse such technology. While the large-scale effects of attempted and failed bioterrorism have previously been dissolved, the challenge of using biotechnology to release harmful pathogens has become a much easier obstacle to overcome because of increased access to technology in the modern age. As this threat continues to overpower the already existing methods of preventing bioterrorism, the United States FBI² in 2022 announced that they are attempting to mitigate the risks by constructing a strong relationship with the iGEM community, who can report any suspicious behavior.

That is just one example of the plethora of people who are utilizing AI machine learning for biological systems, but what about hundreds, if not thousands? What could happen if they

¹“iGEM Competition.” *Concordia University*, <https://www.concordia.ca/research/casb/training/igem.html>. Accessed 25 November 2022.

²Ossola, Alexandra, and Edward You. “Why Is The FBI Reaching Out To Student Bioengineers?” *VICE*, 28 November 2016, <https://www.vice.com/en/article/yp3knm/igem-fbi>. Accessed 25 November 2022.

chose to change their approach and instead develop biochemical weapons for terrorism? In fact, the iGEM stated that this software was based on other open source software that is readily available for use, meaning that any individual or group could get their hands on this software. The threat of biochemical weapons and bioterrorism through technology looms on the horizon, and there needs to be solutions in order to stop this issue.

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