Conclusions drawn by many artificial intelligence studies cannot be replicated. Here's why this is a concern

History shows civil wars to be among the messiest, most horrifying of human affairs. So Princeton professor Arvind Narayanan and his PhD student Sayash Kapoor got suspicious last year when they discovered a strand of political science research claiming to predict when a civil war will break out with more than 90 percent accuracy, thanks to <u>artificial intelligence</u>... Yet when the Princeton researchers looked more closely, many of the results turned out to be a mirage.

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"They were claiming near-perfect accuracy, but we found that in each of these cases, there was an error in the machine-learning pipeline," says Kapoor. When he and Narayanan fixed those errors, in every instance they found that modern AI offered virtually no advantage.

That experience prompted the Princeton pair to investigate whether misapplication of machine learning was distorting results in other fields—and to conclude that incorrect use of the technique is a widespread problem in modern science.

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"The idea that you can take a four-hour-long online course and then use machine learning in your scientific research has become so overblown," Kapoor says. "People have not stopped to think about where things can potentially go wrong."

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