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DIGITAL FRONTIERS, BREAKING BARRIERS

Robots are taking all our jobs

How artificial intelligence is being used and why it doesn't mean the end for humans

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I watched Black Mirror till 3AM last night while I hugged my blanket and prayed that technology doesn't turn the world into what the show portrays.

Then I remembered that my time would be better spent writing this article, but I seriously consider Black Mirror to be important research when it comes to artificial intelligence. I grew up reading science fiction novels where robots take over the world after humans are done destroying the planet. That seemed to be in the distant future back in the 00s. But now, artificial intelligence is no longer some far-fetched concept from science fiction, it's here to stay. Question is, can it rule the world?

According to Black Mirror, it can, and it'll make humans suffer. But let us not forget that that show, however relatable, is still fiction. We've still got a long way to go until we have to take orders from robots. At the moment, AI is being used for a wide range of things, and it's all under control.

Artificial intelligence does not operate with a predefined, concrete algorithm. Rather it's a software that can learn new things on its own. Google has quite a few big and small AI experiments. Quick, Draw! is one such experiment that you can try out anytime. You have to draw some objects, and a neural network has to guess what you're drawing. It's really quite addictive.

Quick, Draw! is a basic example of machine learning, a process through which computers go through mounds of data to recognise patterns and make predictions. This "deep learning" technique is not just being used to create complex artificial intelligence; it's everywhere - from the very familiar Siri, to Facebook's online targeting tools. But can machines do a human's job? Truth is, they can. Think of online banking, there was a time when you'd have to go to the bank each time you had to withdraw money. Now ATMs have replaced the bank tellers. However, in the long run, technology has created more jobs than it has destroyed. Because ATMs had greatly reduced costs, banks were able to open new branches with their surplus money, therefore creating new jobs. Albeit, ATM is not AI, and the effects of AI will be far more severe than that of automated machines. An article from The Economist offered insight on this matter, saying "AI will not so much replace workers directly as require them to gain new skills to complement it."

Until a few years ago, AI was a somewhat obscure branch of computer science. But now that the technology's more developed, it can be used in many different ways for the good of humanity. Take medical science, for example. It's difficult to accurately predict when a heart attack might occur for high-risk patients, and manual predictions are right only 30% of the time. But a machine-learning algorithm developed in Carnegie Mellon University has an 80% chance of correctly predicting the event four hours beforehand. Similar technologies can be developed for patients with other conditions, and this can greatly improve the healthcare sector.

Loan defaulting is a serious problem in the banking sector, in fact it's caused major economic crises in many countries in the past. Upstart is an online marketplace that uses a sophisticated algorithm that takes many traditional and non-traditional variables into account, in order to determine a borrower's creditworthiness. Many physical banks are also in the process of developing algorithms that will help them choose whom they should lend money to, thereby reducing risks of loan defaulting.
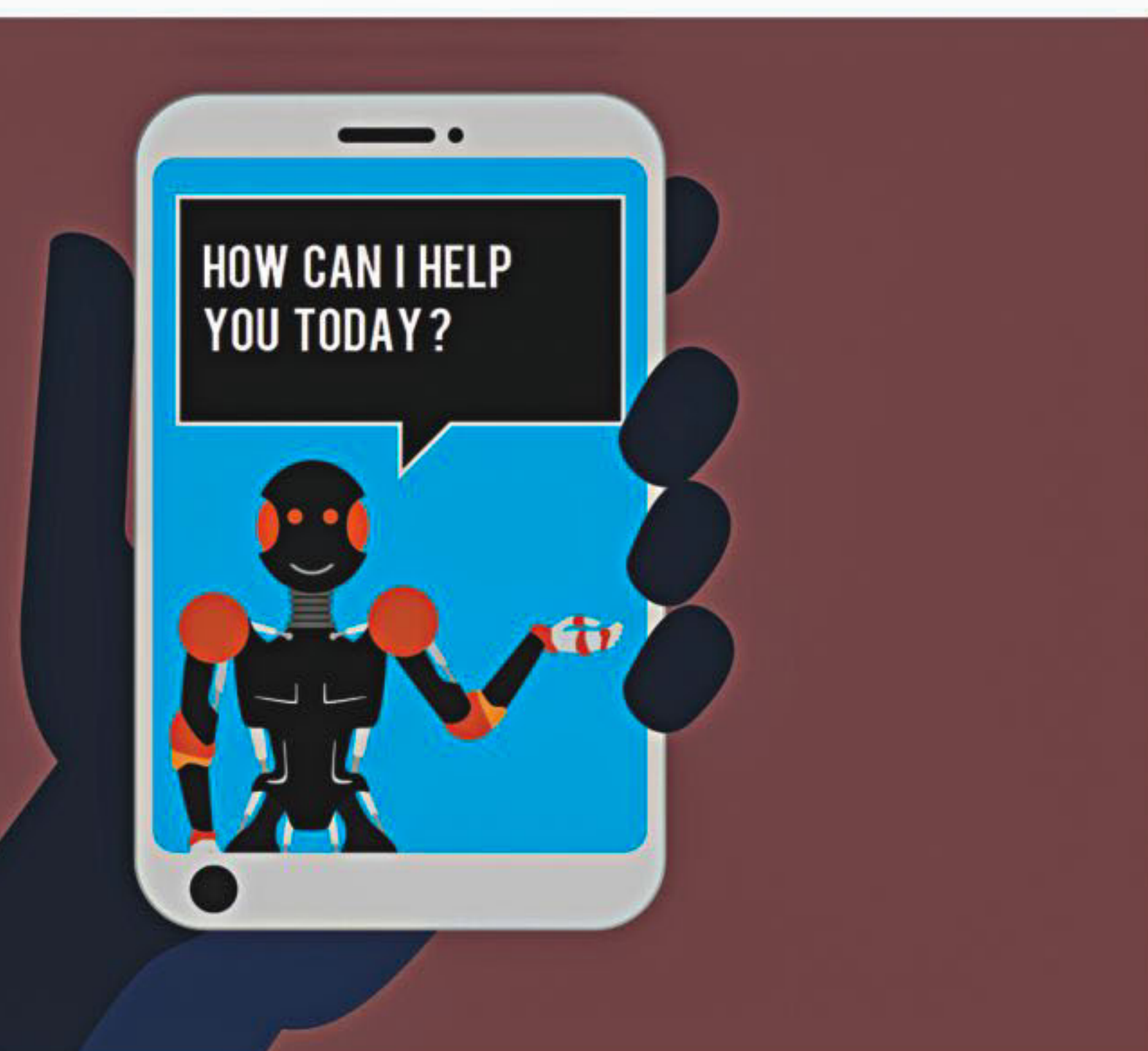
Intelligent Tutoring Systems (ITS) have been adopted for defense training quite some time ago, and it's proven to be a great success. Everyday classrooms however, have not yet started to use AI, either due to lack of funding or general skepticism about the technology. In Bangladesh where the quality of education is inconsistent throughout the country, ITS can be an excellent tool. It uses a large inventory of knowledge that's built with the help of real world academics, and the system can replicate the roles of teachers or teaching assistants. It can provide immediate and customised instructions and feedback to students.

Apart from these macro level applications of artificial intelligence, there are a thousand ways through which we can use this technology in our daily lives. We're all somewhat used to Apple's Siri and Google Assistant. These intelligent personal assistants make everyday life much easier, and as the days go by, they'll become more and more human-like. There are AI based apps such as Digit, that analyses your spending habits to help you optimise your personal finance related decisions. It can even decide how much money to put in to your savings account.

Artificial intelligence hasn't been around for too long, yet it has already become indispensable. Even if it starts replacing humans, it sure will be interesting to see how it slowly changes and shapes the future. I would like to end this article with my personal favourite AI application of the time - FakeApp. This app has an algorithm that can scan a person's face and insert it into any video clip, and of course, you can use it to insert Nicolas Cage, or even Dipjol into every movie ever made. I do hope that artificial intelligence continues to not only revolutionise the healthcare and education sector, but also make such apps that just put a smile on our faces.

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