

FACEBOOK DEPLOYS AI TO FIGHT 'TERRORIST CONTENT'

TECHNOLOGY BLOCKS CHILD PORNOGRAPHY FROM FACEBOOK

SAN FRANCISCO: Facebook has started deploying its artificial intelligence capabilities to help combat terrorists' use of its service. Company officials said in a blog post Thursday that Facebook will use AI in conjunction with human reviewers to find and remove "terrorist content" immediately, before other users see it. Such technology is already used to block child pornography from Facebook and other services such as YouTube, but Facebook had been reluctant about applying it to other potentially less clear-cut uses.

In most cases, Facebook only removes objectionable material if users first report it. Facebook and other internet companies face growing government pressure to identify and prevent the spread of terrorist propaganda and recruiting messages on their services. Earlier this month, British Prime Minister Theresa May called on governments to form international agreements to prevent the spread of extremism online. Some proposed measures would hold companies legally accountable for the material posted on their sites.

The Facebook post - by Monika Bickert, director of global policy management, and Brian Fishman, counterterrorism policy manager - did not specifically mention May's calls. But it acknowledged that "in the wake of recent terror attacks, people have questioned the role of tech companies in fighting terrorism online." "We want to answer those questions head on. We agree with those who say that social media should not be a place where terrorists have a voice," they wrote. Among the AI techniques used in this effort are image matching, which compares photos and videos people upload to Facebook to "known" terrorism images or video.

Matches generally mean that either that Facebook had previously removed that material, or that it had ended up in a database of such images that Facebook shares with Microsoft, Twitter and YouTube. Facebook is also developing "text-based signals" from previously removed posts that praised or supported terrorist organizations. It will feed those signals into a machine-learning system, over time, will learn how to detect similar posts. Bickert and Fishman said that when Facebook receives reports of potential "terrorism posts," it reviews those reports urgently.

In addition, it says that in the rare cases when it uncovers evidence of imminent harm, it promptly informs authorities. But AI is just part of the process. The technology is not yet at the point where it can understand nuances of language and context, so humans are still in the loop. Facebook says it employs more than 150 people who are "exclusively or primarily focused on countering terrorism as their core responsibility." This includes academic experts on counterterrorism, former prosecutors, former law enforcement agents and analysts and engineers, according to the blog post.—AP



PHILADELPHIA: In this file photo, the Facebook logo is displayed on an iPad in Philadelphia.—AP



SAN FRANCISCO: Two phones show the old version of the Twitter app, right, and the new version, left, in San Francisco.—AP

TWITTER UNVEILS NEW LOOK, WHICH USERS QUICKLY MOCK

SAN FRANCISCO: Twitter has unveiled a new look, and much like some previous changes the company has made to its short-messaging service, it's not going over so well with the Twitterati. The San Francisco company says the new design emphasizes simplicity, making it faster and easier to use, with bolder headlines and more intuitive icons. It also changed users' profile images from square-shaped to round. The company said the new user interface will roll out on twitter.com, Twitter for iOS, Twitter for Android, TweetDeck, and Twitter Lite in the coming days and weeks.

Twitter users immediately responded Thursday by tweeting jokes and memes critical of the changes. There were almost 30,000 tweets about the new user interface, or UI, within hours of the change,

the vast majority of them either complaining about the new look or mocking it. A popular image was a suddenly round SpongeBob SquarePants. Twitter also took heat from users last year when it changed its algorithm that orders the tweets users see.

Users also tweeted their dismay when the company rolled out its "Moments" feature, and when it got rid of its star icon signifying a "favorite" tweet, in favor of a heart icon, similar to Facebook's "like" button. The redesign is Twitter's latest attempt to freshen the messaging service, which has struggled to attract new users at the same pace as Instagram, Facebook and Snapchat. Twitter revenue growth has stalled for years, and the company has cut costs and shuffled executives while still never posting a quarter of profit.—AP

AI AND HEALTH REVOLUTION

WASHINGTON: Your next doctor could very well be a bot. And bots, or automated programs, are likely to play a key role in finding cures for some of the most difficult-to-treat diseases and conditions. Artificial intelligence is rapidly moving into health care, led by some of the biggest technology companies and emerging startups using it to diagnose and respond to a raft of conditions. Consider these examples:

California researchers detected cardiac arrhythmia with 97 percent accuracy on wearers of an Apple Watch with the AI-based Cardiogram application, opening up early treatment options to avert strokes. Scientists from Harvard and the University of Vermont developed a machine learning tool-a type of AI that enables computers to learn without being explicitly programmed-to better identify depression by studying Instagram posts, suggesting "new avenues for early screening and detection of mental illness."

Researchers from Britain's University of Nottingham created an algorithm that predicted heart attacks better than doctors using conventional guidelines. While technology has always played a role in medical care, a wave of investment from Silicon Valley and a flood of data from connected devices appear to be spurring innovation.

"I think a tipping point was when Apple released its Research Kit," said Forrester Research analyst Kate McCarthy, referring to a program letting Apple users enable data from their daily activities to be used in medical studies. McCarthy said advances in artificial intelligence has opened up new possibilities for "personalized medicine" adapted to individual genetics. "We now have an environment where people can weave through clinical research at a speed you could never do before," she said.

Predictive analytics

AI is better known in the tech field for uses such as autonomous driving, or defeating experts in the board game Go. But it can also be used to glean new insights from existing data such as electronic health records and lab tests, says Narges Razavian, a professor at New York University's Langone School of Medicine who led a research project on predictive analytics for more than 100 medical conditions.

"Our work is looking at trends and trying to predict (disease) six months into the future, to be able to act before things get worse," Razavian said. NYU researchers analyzed medical and lab records to accurately predict the onset of dozens

of diseases and conditions including type 2 diabetes, heart or kidney failure and stroke. The project developed software now used at NYU which may be deployed at other medical facilities. Google's DeepMind division is using artificial intelligence to help doctors analyze tissue samples to determine the likelihood that breast and other cancers will spread, and develop the best radiotherapy treatments.

Microsoft, Intel and other tech giants are also working with researchers to sort through data with AI to better understand and treat lung, breast and other types of cancer. Google parent Alphabet's life sciences unit Verily has joined Apple in releasing a smart watch for studies including one to identify patterns in the progression of Parkinson's disease. Amazon meanwhile offers medical advice through applications on its voice-activated artificial assistant Alexa. IBM has been focusing on these issues with its Watson Health unit, which uses "cognitive computing" to help understand cancer and other diseases.

When IBM's Watson computing system won the TV game show Jeopardy in 2011, "there were a lot of folks in health care who said that is the same process doctors use when they try to understand health care," said Anil Jain, chief medical officer of Watson Health. Systems like Watson, he said, "are able to connect all the disparate pieces of information" from medical journals and other sources "in a much more accelerated way." "Cognitive computing may not find a cure on day one, but it can help understand people's behavior and habits" and their impact on disease, Jain said. It's not just major tech companies moving into health.

Research firm CB Insights this year identified 106 digital health startups applying machine learning and predictive analytics "to reduce drug discovery times, provide virtual assistance to patients, and diagnose ailments by processing medical images." Maryland-based startup Insilico Medicine uses so-called "deep learning" to shorten drug testing and approval times, down from the current 10 to 15 years. "We can take 10,000 compounds and narrow that down to 10 to find the most promising ones," said Insilico's Qingsong Zhu. Insilico is working on drugs for amyotrophic lateral sclerosis (ALS), cancer and age-related diseases, aiming to develop personalized treatments.

Finding depression

Artificial intelligence is also increasingly seen as a means for detecting depression and other mental illnesses, by spotting patterns that may not be obvious, even to professionals. A research paper by Florida State University's Jessica Ribeiro found it can predict with 80 to 90 percent accuracy whether someone will attempt suicide as far off as two years into the future. Facebook uses AI as part of a test project to prevent suicides by analyzing social network posts.

And San Francisco's Woebot Labs this month debuted on Facebook Messenger what it dubs the first chatbot offering "cognitive behavioral therapy" online partly as a way to reach people wary of the social stigma of seeking mental health care. New technologies are also offering hope for rare diseases. Boston-based startup FDNA uses facial recognition technology matched against a database associated with over 8,000 rare diseases and genetic disorders, sharing data and insights with medical centers in 129 countries via its Face2Gene application.

Cautious optimism

Lynda Chin, vice chancellor and chief innovation officer at the University of Texas System, said she sees "a lot of excitement around these tools" but that technology alone is unlikely to translate into wide-scale health benefits. One problem, Chin said, is that data from sources as disparate as medical records and Fitbits is difficult to access due to privacy and other regulations. More important, she said, is integrating data in health care delivery where doctors may be unaware of what's available or how to use new tools. "Just having the analytics and data get you to step one," said Chin. "It's not just about putting an app on the app store.—AP



CAMBRIDGE: In this photo, the entrance to Watson Health is seen in Cambridge, Massachusetts.—AFP



COTONOU: This file photo shows Benin's security forces at a busy intersection during an evacuation in downtown Cotonou.—AFP photos

FREE MAPPING: PLOTTING DEVELOPMENT IN AFRICA

COTONOU: In Benin's economic capital of Cotonou, as in many other African cities, finding a house, office or restaurant is often like a treasure hunt. Luck, if not a miracle, is required as easy clues such as street names, even where they exist, are usually not posted and address numbers are rarely marked. Most people in Cotonou formulate complex combinations of landmarks and directions to navigate around town. Typical directions might be: "My office is after the big market, past the apartment block on the right with the mobile phone mast, and it's the third road on the left, tiled building."

Can't see the apartment block with the mobile phone mast? Game over, back to square one. Sam Agbadonou, a 34-year-old former medical technician, knows how frustrating it can be to get around and describes Cotonou as a "navigation challenge." "I was called when there were breakdowns and went to health centers to repair machines that save lives," he said. "But some centers are really in the middle of outlying neighborhoods and it is difficult to get there." Now, to put an end to the hassle and quickly find their destination, locals are turning to crowdsourced mapping applications adapted for use in Africa that are challenging Google Maps for dominance on the continent.

Map party

In 2013, when Agbadonou heard about OpenStreetMap, an international project founded in 2004 to create a free world map, he knew it was a good idea. Agbadonou founded the Benin branch of the project, which today boasts 30 members. With his

friend Saliou Abdou, a trained geographer, Agbadonou regularly organizes "map parties"-field trips to identify the city's geographical data. They start with the basic-street names and address numbers-and move on to other details that set their maps apart from the Silicon Valley competition.

"We write down everything: the trees, the water points, the vulcaniser (tyre repairer) on the street corner, the tailor's shop... You don't see that on Google Maps!" Agbadonou said with pride. Thanks to his work over the last four years, Cotonou is slowly revealing itself. For example, the Ladj district, which never used to feature on most maps, is now included. Armelle Choplin, an urban planner at the Institute of Research for Development (IRD) in Cotonou, has no choice but to use Google Maps for her work.

But she is relying more and more on the crowdsourced maps which are more adapted to an African context. "IGN France (the French national institute of geographic and forest information) carried out an aerial mapping of Benin between 2015 and 2016 and it should be available in September," Choplin said. "But we don't know if we will have access or the terms."

Social inclusion

Rapid population growth, lack of regulation in real estate and haphazard urbanization are a headache for most big cities in Africa. Along the coast in Ghana, Sesinam Dagadu created a similar mobile app called SnooCode, which targets the poorest in society and the illiterate. His goal is to give "an address for every man, woman and child" by issuing an individual "location code" as a substitute address. — AFP



COTONOU: This file photo shows motorcyclists driving on a major road in Cotonou.

APPLE SEES AUTONOMOUS CARS AS CORE TECHNOLOGY

SAN FRANCISCO: Apple views autonomous driving systems as a "core technology" for the future, chief executive Tim Cook said in an interview aired Tuesday. Cook told Bloomberg television that Apple wants to move into the automotive sector because "there is a major disruption looming" from new technologies. The auto sector, Cook said, is being transformed by artificial intelligence and autonomous driving technology as well as by the development of better electric cars and the growth of ridesharing.

"We are focusing on autonomous sys-

tems," he told Bloomberg. He said Apple sees this as "the mother of all AI projects" and that this is "a core technology that we view as very important." While Apple has given no indication of specific projects for autonomous vehicles, it has joined the list of companies with permits to test self-driving cars in California, according to state records. The California-based tech giant is expected to focus on software systems, letting partners manufacture vehicles, but would understandably want to be able to test its navigation technology in cars.—AFP