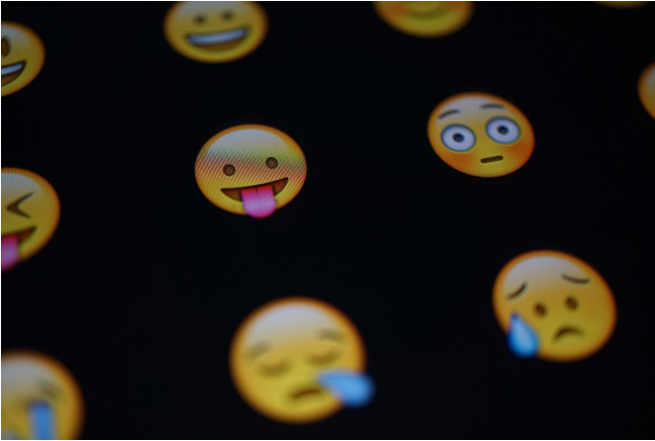


# Researchers turn to emoji icons as tool to smell sarcasm

8 August 2017, by Nancy Owano



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(Tech Xplore)—One of the headaches researchers have in training computers is trying to understand what a human really means to say when the person is using sarcasm and irony. (Terrific, train is stuck. Shocking news, our daughter is late. What could possibly go wrong. Rush hour traffic, fun, fun.)

A project might achieve a head start. A video was posted on August 3 from the MIT Media Lab, about something called DeepMoji. This is a model that uses millions of tweets to learn about emotional concepts in text such as sarcasm and irony.

What do people really mean when they write? Simple question, and researchers know better; it is a difficult question when training computers. DeepMoji researchers are turning to [emoji](#) icons to understand sarcasm. How? With state of the art algorithms—and millions of messages.

The DeepMoji project page states that "instead of explicitly telling the machine how to recognize emotions, we ask the machine to learn from many examples of actual [text](#)."

The more data they have, the better off they can figure this out.

*MIT Technology Review:*

"The algorithm uses deep learning, a popular machine-learning technique that relies on training a very large simulated neural network to recognize subtle patterns using a large amount of data. The secret to training this algorithm was that many tweets already use something like a labeling system for [emotional content: emoji](#)." The researchers collected 55 billion tweets, and they selected 1.2 billion containing some combination of 64 popular emoji, said the report.

A number of practical uses come to mind if their project method is to cross into real world applications. Social media comments could be better understood, including remarks indicating bullying and racism.

Also, the project page said, "The classic use case is companies wanting to make sense of what their customers are saying about them. But there are many other use cases as well now that natural language processing (NLP) is becoming an increasingly important part of consumer products. For instance, all of the new chatbot services popping up might benefit from having a nuanced understanding of emotional content in text. Lastly, it can hopefully be used for various interesting research purposes."

Iyad Rahwan, an associate professor of Media Arts and Sciences at the MIT Media Lab, developed the algorithm with one of his students, Bjarke Felbo.

In the bigger picture, Felbo assessed what the work might bring to emotion analysis. In an August 3, post, "What Can We Learn from Emojis?" Felbo wrote, "This research is only a small step towards more sophisticated emotion analysis." One contribution in this field, for example, might be "A

proper benchmark dataset with more [nuanced](#) labels than positive/negative. Benchmarks drive ML research so this is critical."

What's next?

Rahwan and Felbo "plan to release the algorithm's code so it can be used by other [researchers](#)," said the BBC.

The entertaining reactions by some BBC site visitors to the news already reflect emoji talk. "Three bowling balls and a palm tree, take that," was one comment.

**More information:**

[www.media.mit.edu/projects/deepmoji/overview/](http://www.media.mit.edu/projects/deepmoji/overview/)

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