

Warmer

Can machines read your emotions?

If so, how? If not, why not?

Discuss your answers with a partner.

Before you watch

The following terms are all used in the video you are about to watch. Use them to complete the sentences below. You may need to change the form of the verbs.

surpass figure out unprecedented cue input complexion flag
disorder

1. The errors were **flagged** in the margin.
2. Bipolar **disorder** is a mental illness in which someone experiences extreme changes in mood.
3. This student **surpasses** all the others in his class.
4. The program accepts **input** from a variety of sources.
5. The flood waters have risen to **unprecedented** levels. I have never seen them so high!
6. How did you **figure out** that maths problem?
7. I took her tired face as my **cue** to leave.
8. The farmer had a brown, rough **complexion** from having spent so many years outdoors.

Now watch the video.

<https://ed.ted.com/lessons/can-machines-read-your-emotions-kostas-karpouzis#watch>

Comprehension check

Discuss the questions below with a partner. Then watch the video again to check your answers.

1. Who was Paul Ekman? *(An American psychologist who identified certain universal emotions.)*
2. What do anger, disgust, fear, joy, sadness and surprise have in common? *(The visual cues for these emotions are understood the same way across cultures.)*
3. Using these words, explain how machines can recognise emotions: nodes, neurons, exchange, samples, network, classify, features. *(Neural **networks** consist of artificial **nodes** that mimic our biological **neurons** by forming connections and **exchanging** information. **Sample** inputs from different categories are fed into the system. The system learns to **classify** the samples by adjusting relative weights assigned to particular **features**.)*
4. Apart from the recognition of facial expressions, what other cues can machines use to read our emotions? *(Body language, vocal tone, changes in heart rate, complexion, skin temperature, word frequency and sentence structure in writing.)*

5. How can machines collect data about our emotions? (*Via social media posts, uploaded photos and videos, phone recordings, heat sensitive security cameras, wearables that monitor physiological signs.*)
6. What beneficial uses can be made of this data? (*Facial recognition of emotions can help children learn, provide lonely people with a sense of companionship. Social media can help prevent suicides by flagging posts that contain specific words or phrases. Low-cost automated psychotherapy could be provided to treat mental disorders.*)
7. What are the potential drawbacks? (*There are negative implications for our privacy when the data is used by corporations to exploit our emotions through advertising. Our rights are at risk if authorities think they can identify people likely to commit crimes before they make a conscious decision to act.*)

After you watch

Discuss these questions with your classmates.

- a) Do you think that machines will eventually be better than humans at figuring out what people are feeling? Why (not)?
- b) Do you think that the “beneficial uses” of emotional recognition mentioned in the video are realistic? Would they really be beneficial?
- c) What about the negative implications? Are the potential drawbacks described in the video likely to happen? Why (not)?
- d) Can you think of any other ways in which machines could either assist or manipulate us by reading our emotions?

Vocabulary development: Emotions

1. Look at the nouns referring to emotions in question 2 of the **Comprehension check**. Think of more nouns for emotions. (*happiness, depression, ambivalence, shock, frustration*)
2. For each noun, think of as many related words from different word classes as you can. For example, sadness (noun), sad (adj), sadly (adv), to sadden (verb). (*Joy, joyful, joyfully; anger, angry, angrily, to anger; fear, afraid, to fear, fearful; disgust, disgusting/disgusted, to disgust, disgustingly; surprise, to surprise, surprising/surprised, surprisingly.*)
3. Complete the sentences below with appropriate emotion words.
 - a) He slammed the door **angrily**
 - b) The news of his death **saddened** them.
 - c) It's not **surprising** you failed the test, as you hadn't done any revision at all.
 - d) You have bread and camembert with hot chocolate for breakfast? That's **disgusting!**
 - e) Many people are **afraid** of speaking in public.
 - f) The employees were **shocked** when they learned of their employer's bankruptcy.
4. Now try to use other emotion words in sentences of your own.