# Affective Computing Trend Map

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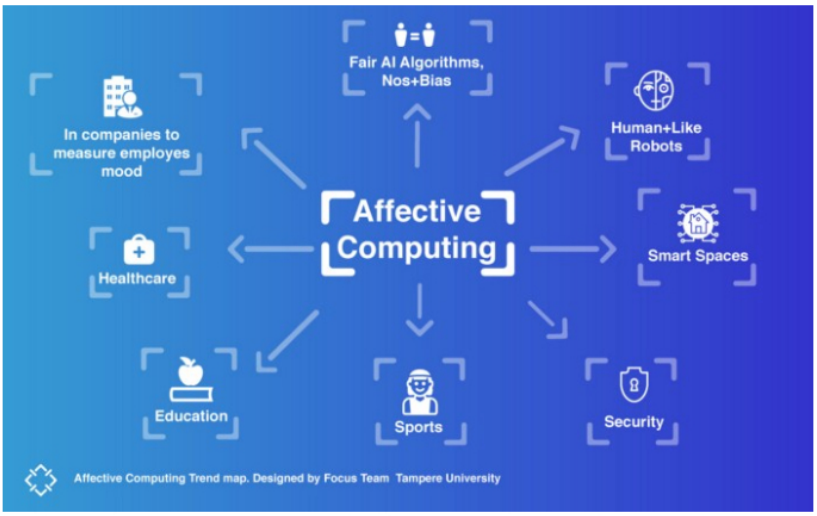
Feb 14 · 3 min read

*Text: Valentina Ramírez & Genís Frigola*




Affective Computing Trend Map. Visualization: Valentina Ramírez

According to Prof. Ahmed Banafa, IoT, Blockchain and AI Expert Affective Computing is: "The study and development of systems and devices that can recognize, interpret, process, and simulate human affects. It is **an interdisciplinary field spanning computer science, psychology, and cognitive science".** In order to explore better the topic and understand the kind of future of this field could create, we developed an affective computing trend map from different technology trends.

**Fair AI Algorithms and non-bias**

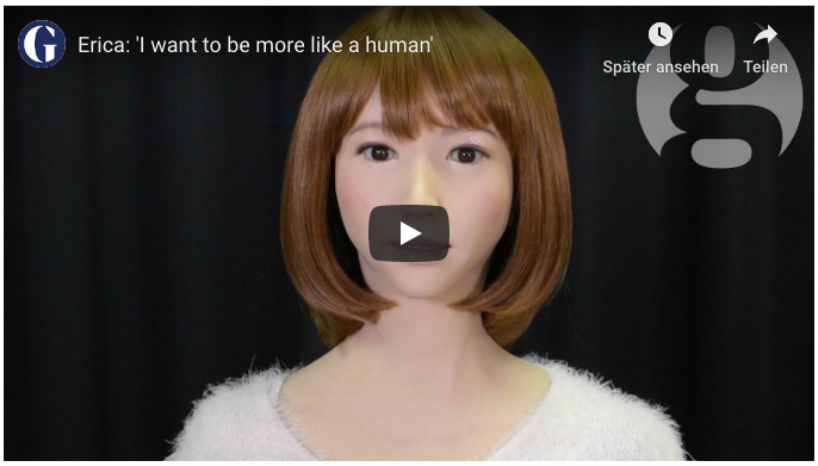
"Machines are getting schooled on fairness" Source: sciencenews.org.

The use of AI in our society is becoming more natural every day. Is not just a Blackmirror nightmare. In the Republic of China, they are using big data extracted from massive police surveillance to qualify their citizens.

This trend aims to have an AI Algorithms that gives an objective resolution. MIT grad student Joy Buolamwini is one the ambassadors against Algorithm Bias "Who codes matter. Are we creating full-spectrum training sets that reflect a richer portrait of humanity? Are we

creating inclusive codes? We now have an opportunity to unlock even greater equality." See the full TED Talk here.

**Human-like robots**




Erica: "I want to be more like a human." By the Guardian

Nowadays they are seen as personal assistants and companions, receptionist and in many other jobs. In the next few years, it's highly possible that we see new and important uses of affective computing because these robots will need to have a human level of emotional intelligence.

The video shows an Interview with Erica a humanoid robot who is created by Hiroshi Ishiguro. This kind of developments make us think what is meant to be human.


"A smart space is a physical or digital environment in which humans and technology-enabled systems interact in increasingly open, connected, coordinated and intelligent ecosystems."

Affective computing could be applied for example in the contexts of smart cities and intelligent urban ecosystems.

### The use of Affective Computing in different scenarios

Companies: To measure how environment and experiences affect the mood of the employees, and thus creating a better work setting for their

of the employees, and thus creating a better work setting for their satisfaction.

Healthcare: Doctors could diagnose conditions and level of discomfort better.

Education: To adequate the learning levels for each student.

Security: To identify people who might be carrying a bomb or smuggling contraband. Roguish or excessively risky behaviors could be detected in advance.

Sports: For real-time feedback for achieving peak performance.

Domotics: To having intelligent homes that adjust the light, music and other ambient settings without having to ask.

### What do we consider about this

Affective computing is a growing trend nowadays. In 2017 Global Affective Computing Market was valued approximately 16.7 billion. For 2023 it is expected to be valued as much as 88.69 billion USD. It is present that big companies, such as Apple, Microsoft or Google, are the key players of this trend in the future. More information can be found here.

We believe that affective computing will keep increasing its presence, significance and value on everyday life technological products. Empathy is the next step in this inescapable technological progress.

### What we think are most potential for our project and what's unrelevant

We can't discard any trend, or say which ones are most potential for our work because we still don't know the user nor the purpose of the product. At first, we need to meet and talk with the stakeholders and the company and after that, we will define which of these trends are meaningful, good and interesting for our project and the future product.

### What do you think — what are the future scenarios related to affective computing?

Artificial Intelligence | Affective Computing | Affective Technology | Machine Learning

WRITTEN BY

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We are Emmi, Genís, and Valentina HTI Students at Tampere University. This blog is used to document the progress in the Human-Centred Product Development course

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