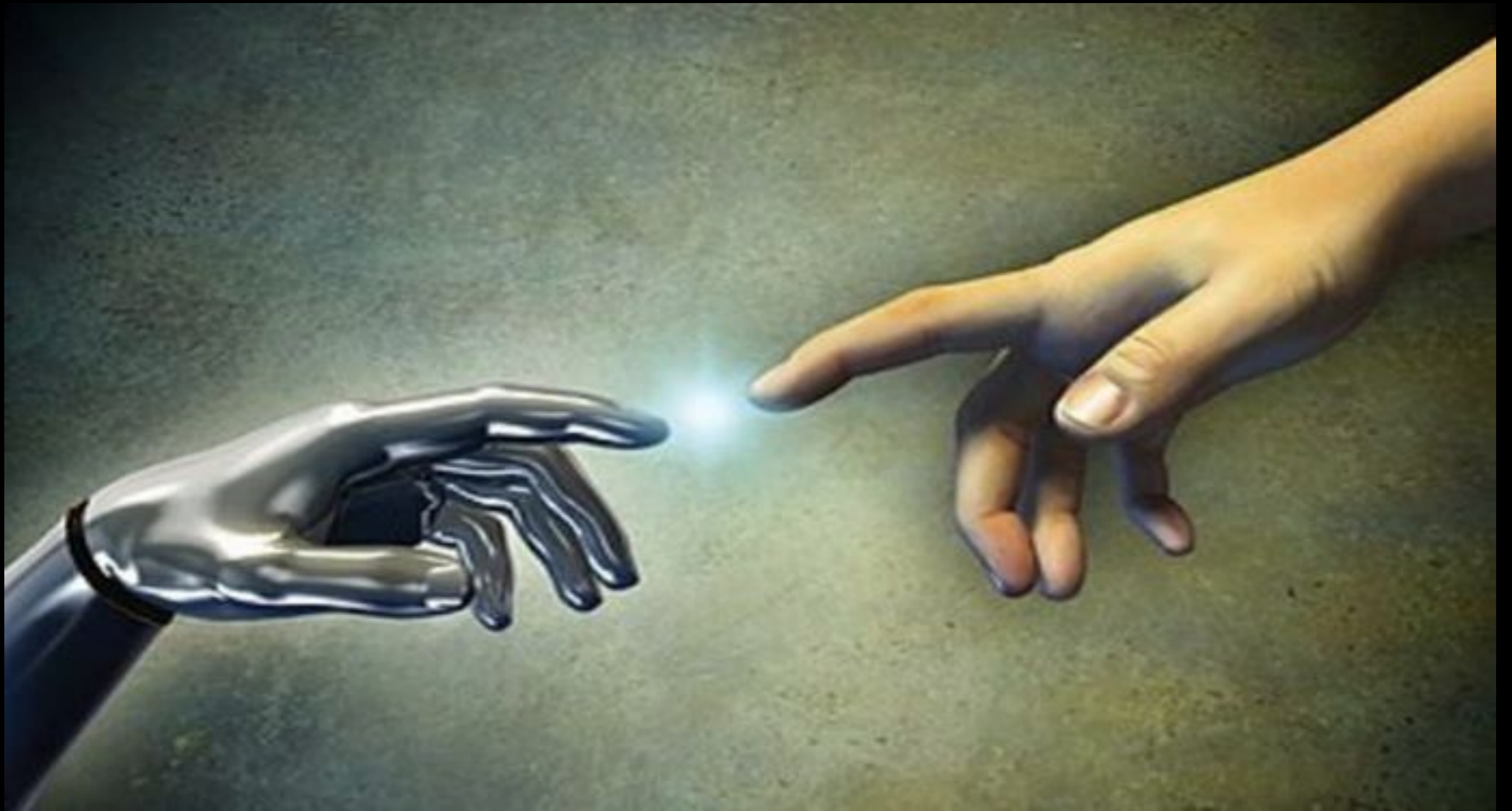


МЕЖДУНАРОДНАЯ НАУЧНАЯ  
ЛАБОРАТОРИЯ  
**ЦИФРОВЫХ ГУМАНИТАРНЫХ  
ИССЛЕДОВАНИЙ**

 УНИВЕРСИТЕТ ИТМО

  
**L A B**

# СВЯЗЬ ИСКУССТВА И ИСКУССТВЕННОГО ИНТЕЛЛЕКТА



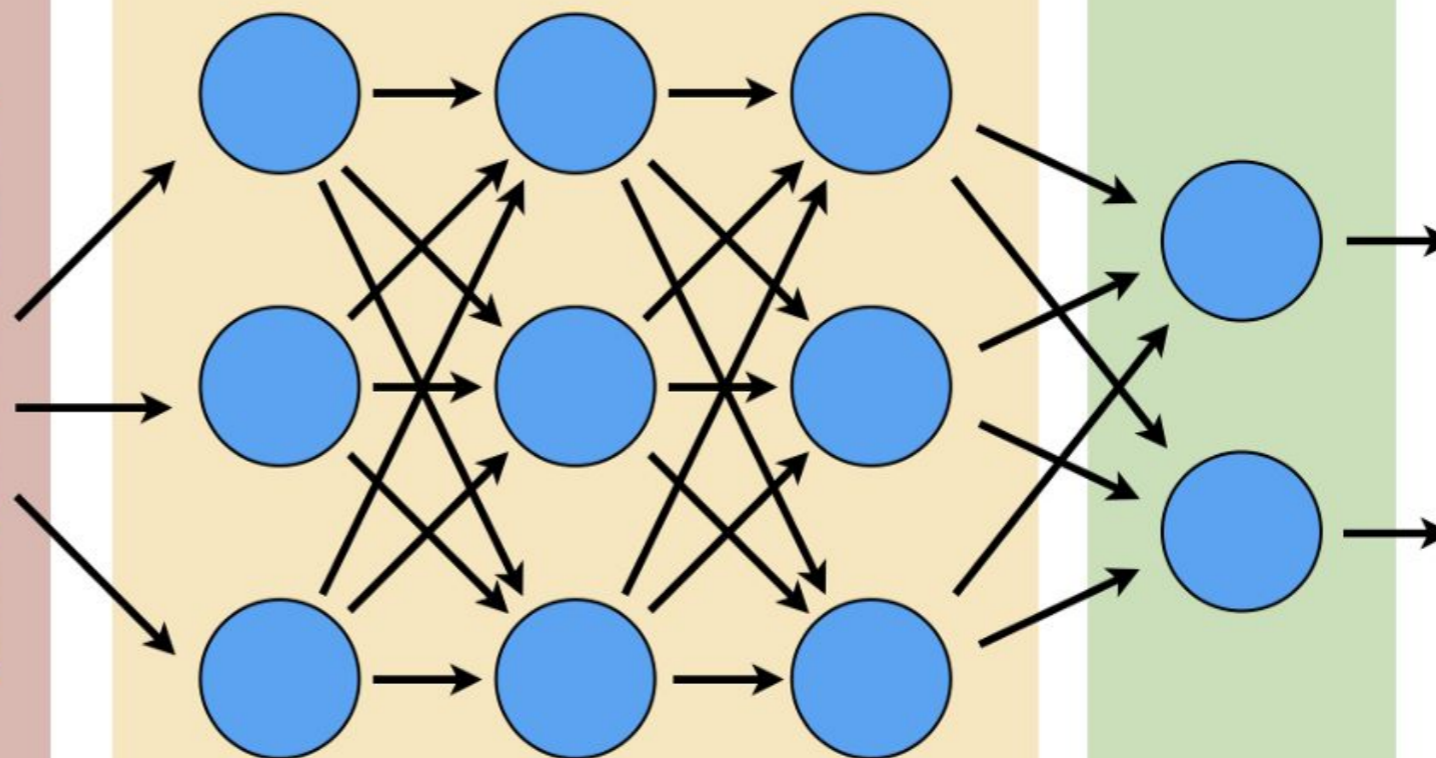




**Input Layer**

**Hidden Layers**

**Output Layer**

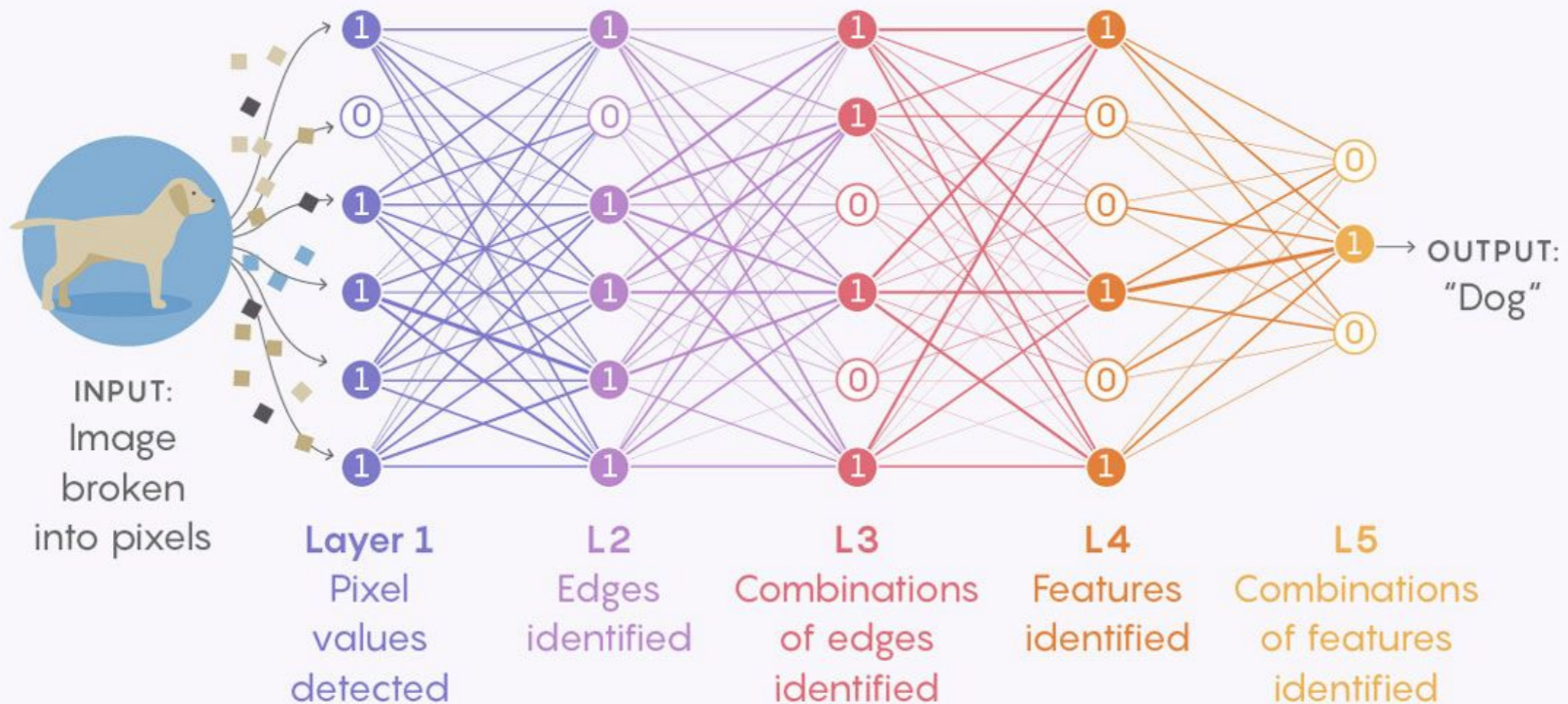


**DOG: 97%**

**CAT: 3%**

# Learning From Experience

Deep neural networks learn by adjusting the strengths of their connections to better convey input signals through multiple layers to neurons associated with the right general concepts.



When data is fed into a network, each artificial neuron that fires (labeled "1") transmits signals to certain neurons in the next layer, which are likely to fire if multiple signals are received. The process filters out noise and retains only the most relevant features.

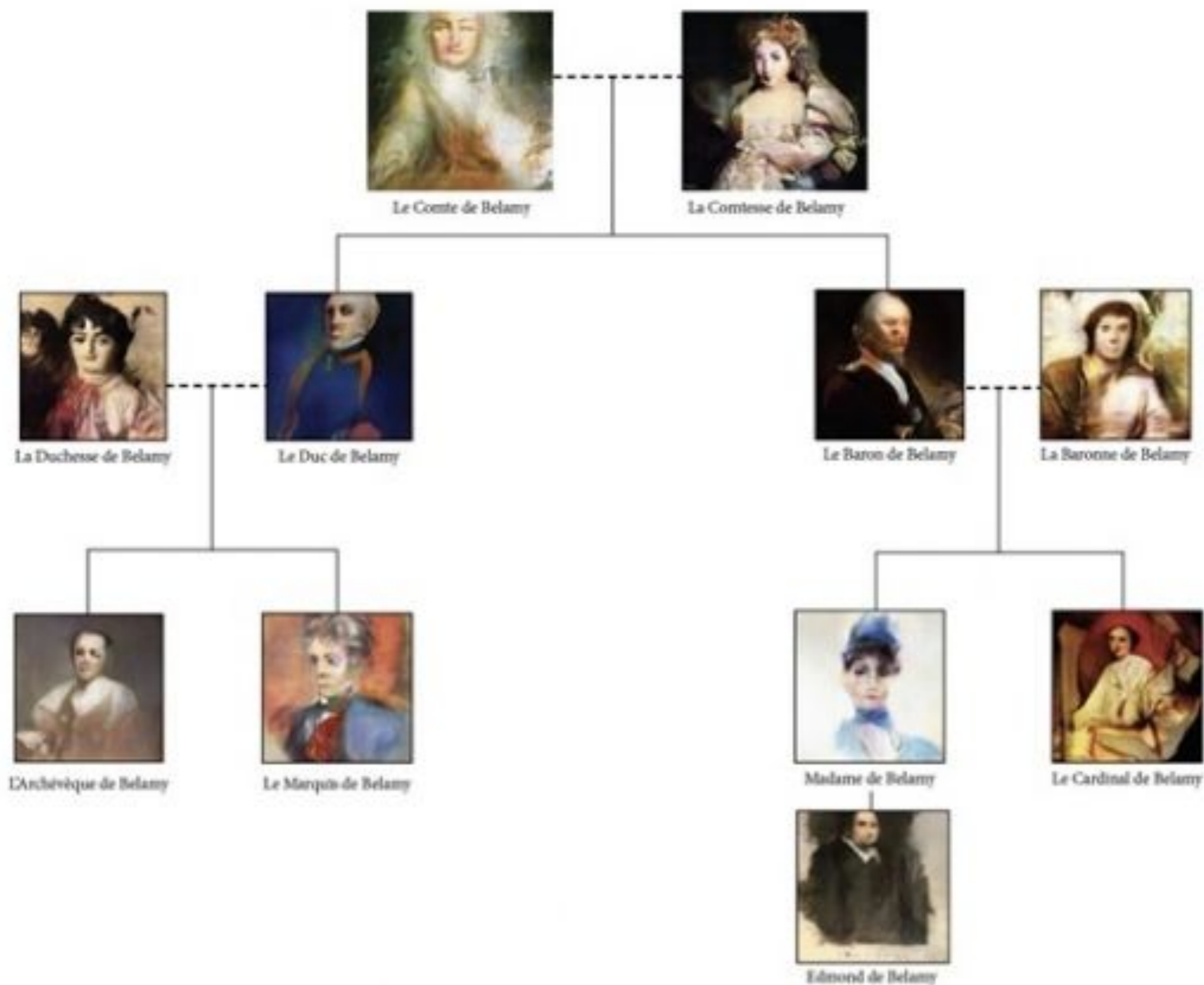


*'Portrait of Edmond de Belamy', (2018)*  
by *'GAN(Generative adversarial network)'*



$$\min_G \max_D \mathbb{E}_x [\log(D(x))] + \mathbb{E}_z [\log(1 - D(G(z)))]$$

# La Famille de Belamy



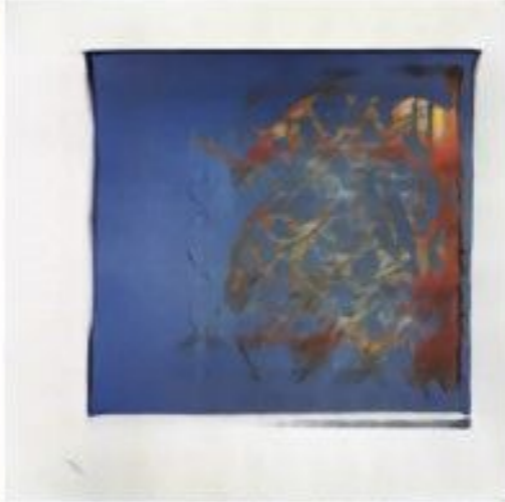
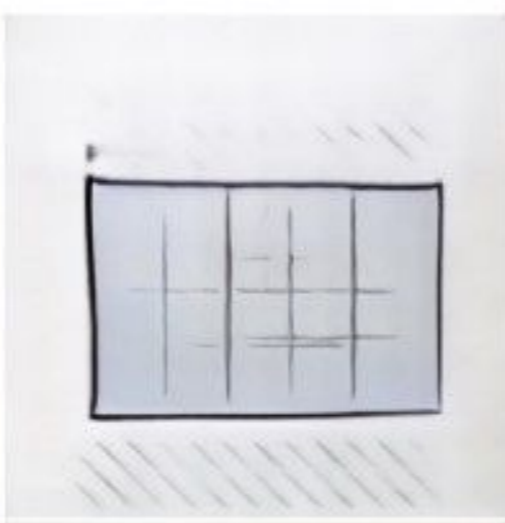
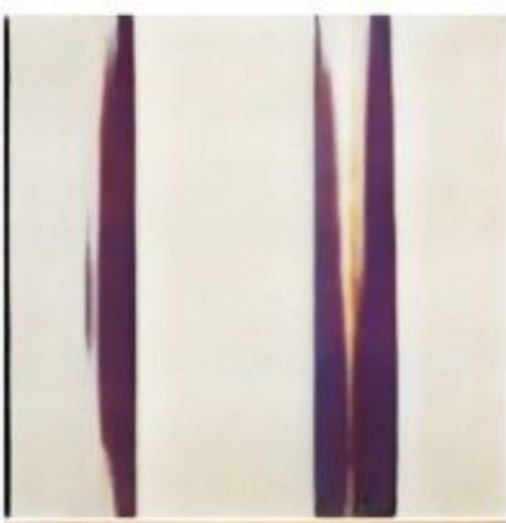


L'Archeveveque De Belamy, (2018)

by 'Obvious'



by 'Obvious'



‘The network has learned that it finds more solutions when it tends toward abstraction: that is where there is the space for novelty.’

*–Ahmed Elgammal, director of the Art and Artificial Intelligence Lab at Rutgers University*



*Green Genesis, (2018)*

by AI CAN



*Unsettled, (2018)*  
by AI CAN





*Flora, (2018)*  
by AI CAN



*'Watermelon Landmine', (2016)*

by Wang Xingwei

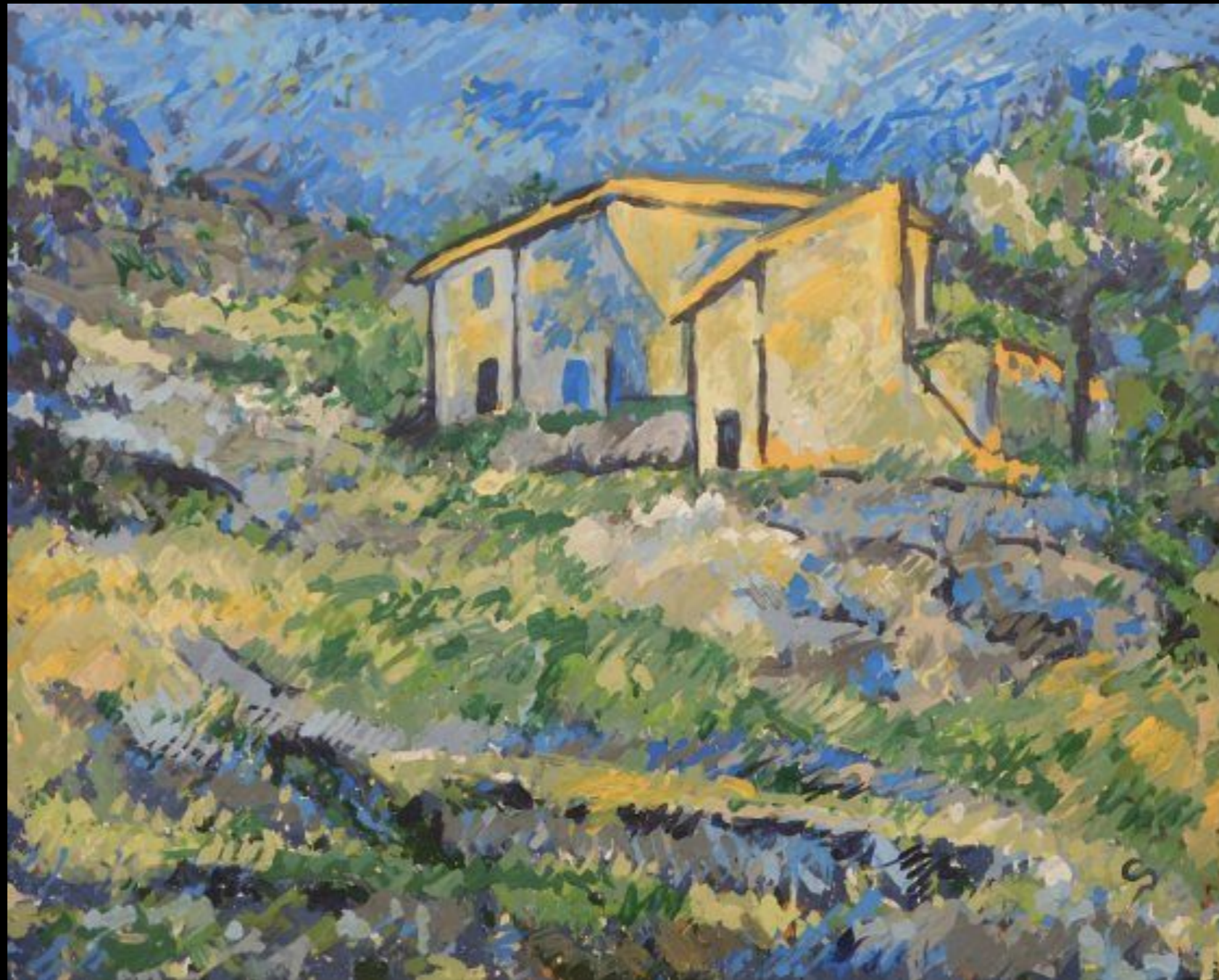


*'A Pile of Stones, Street Scene, Syria'*  
(2016)

by Clive van den Berg

‘The biggest artistic  
achievement of the year’.

*-Artsy*



Reproduction of Cézanne's '*Houses at the L'Estaque*' (1880).  
by Cloud Painter (2018)



*'Houses at the L'Estaque'* (1880)  
by Paul Cezanne

# AI Imagined Portrait

by Cloud Painter (2018)



‘My robots’ paintings are a record of our progress’.

*-Pindar Van Arman, inventor of ‘Cloud Painter’ (winner of Roboart in 2018)*

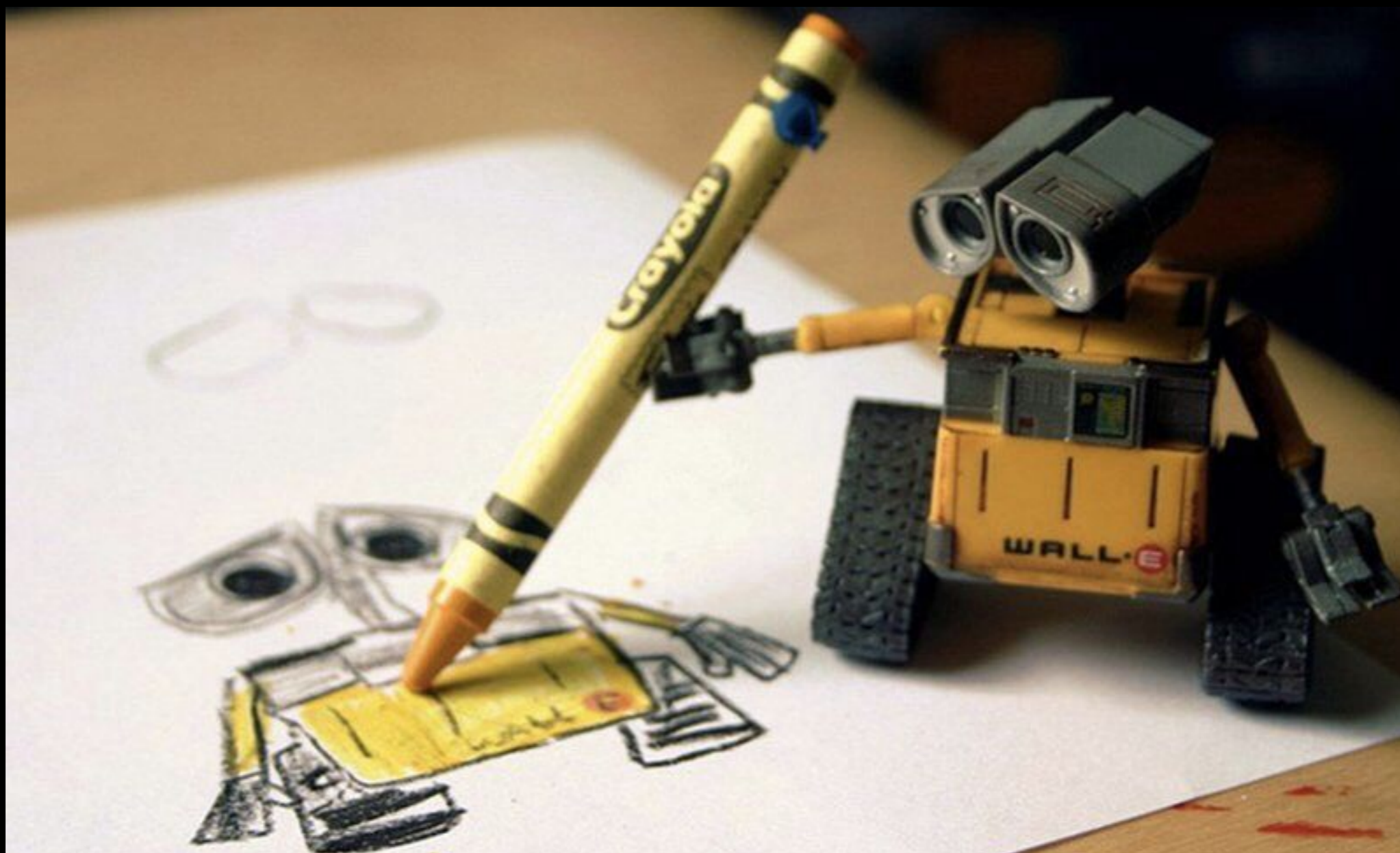




‘If the artist is the one that creates the image, then that would be the machine,’ says Caselles-Dupré. ‘If the artist is the one that holds the vision and wants to share the message, then that would be us.’

‘For sure, the machine did not want to put emotions into the pictures. And in research terms, the idea of a robot having an open-world experience, and using it to make something new — that is pure science fiction for now.’

*–Hugo Caselles-Dupré from ‘Obvious’*



Спасибо за внимание!