



Robbie Barrat: art-DCGAN

Currents in AI and Art

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Art and Artificial Intelligence

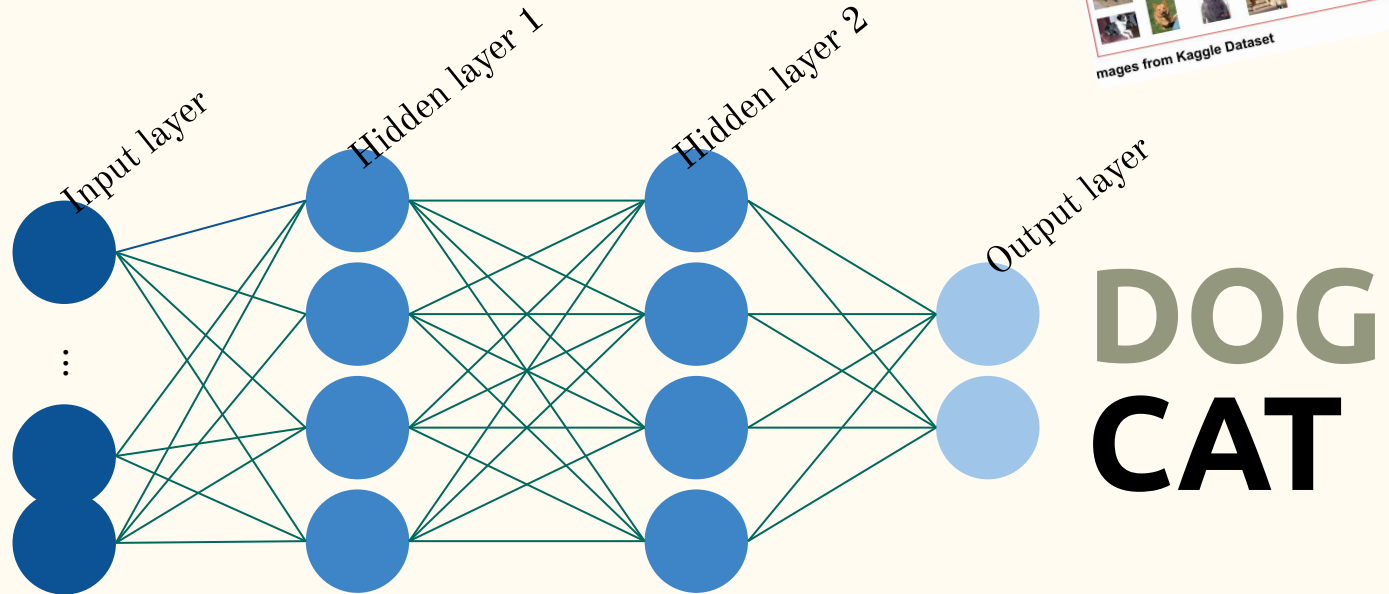
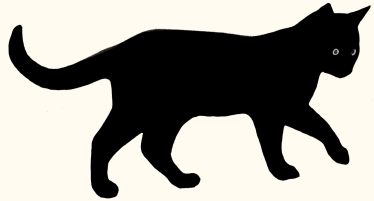
Kasper Mäki-Reinikka
7.5.2019

Image to information
and vice versa

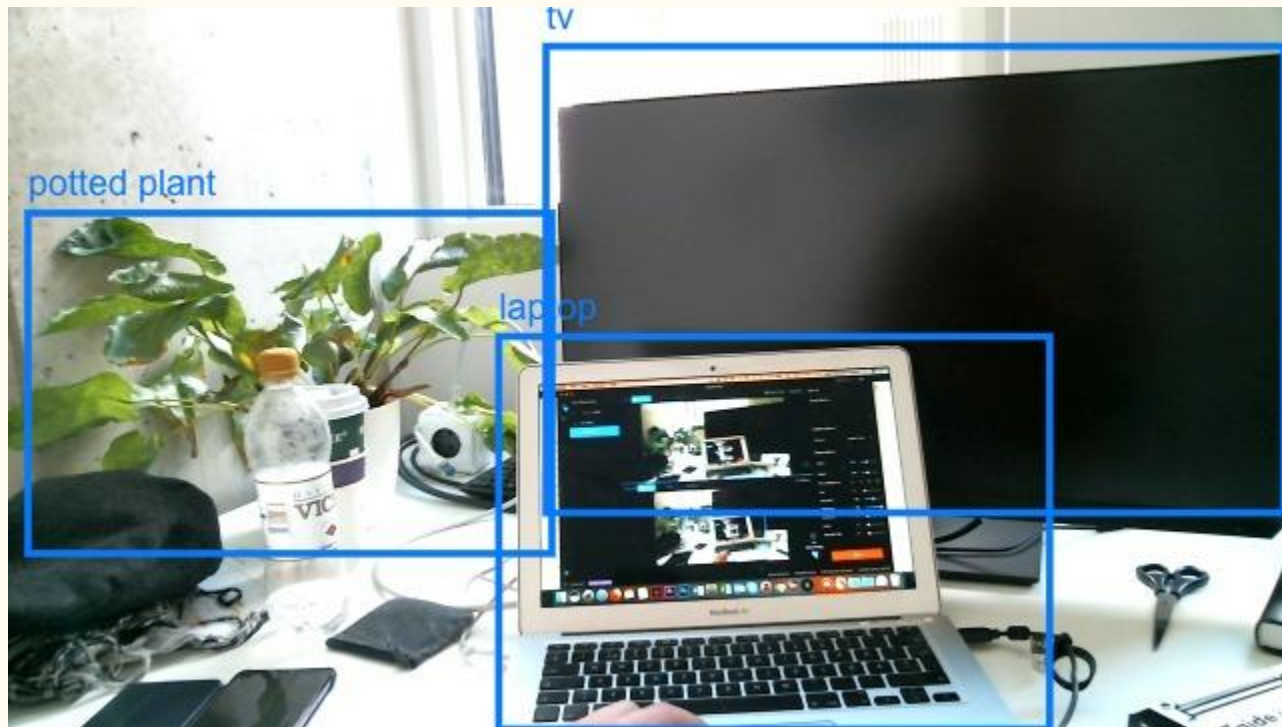


Artificial Neural Networks

- Inspiration from biological neural networks
- Each artificial cell has an input, does calculation, and sends the signal forward



Example: Object detection



Example: image to text



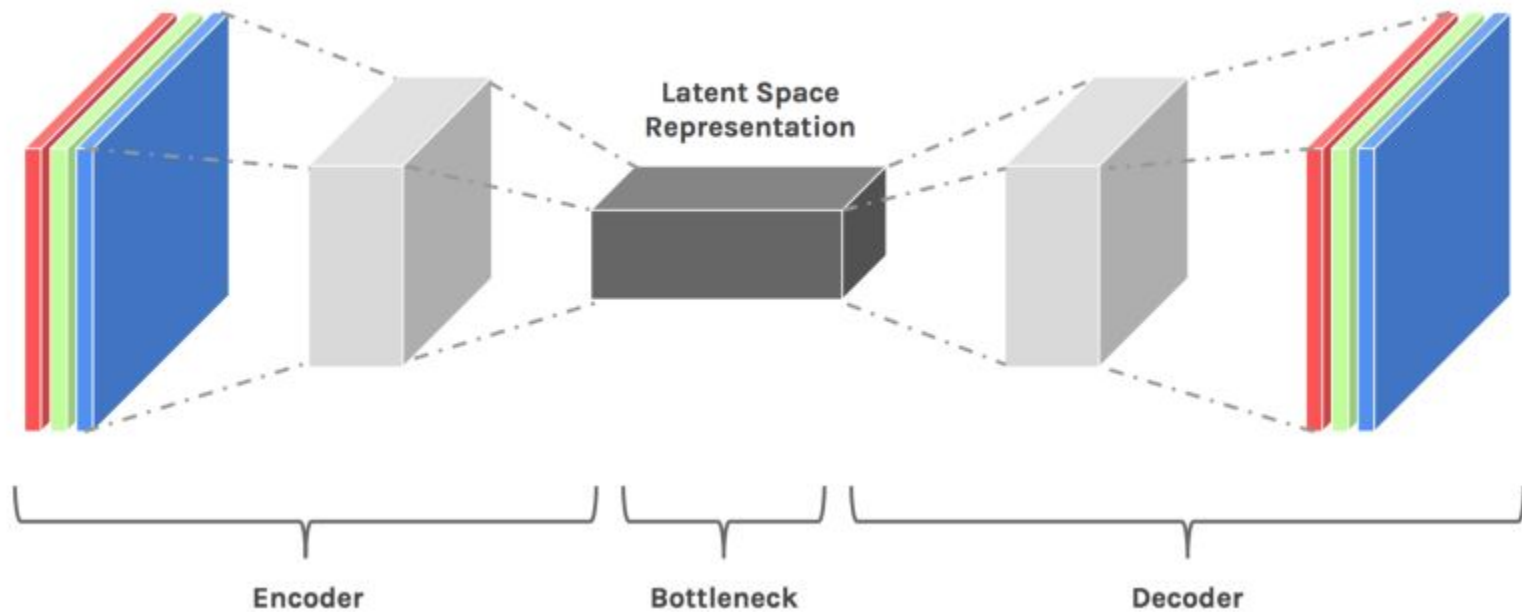
a group of men standing next to each other



a herd of sheep grazing on a lush green hillside

Input image

Reconstructed image

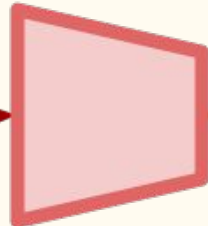


Original Face

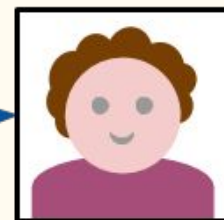
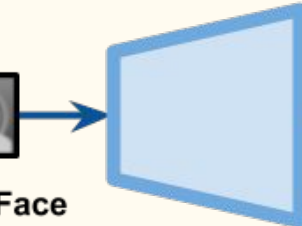
Encoder

Decoder

Reconstructed Face



Latent Face



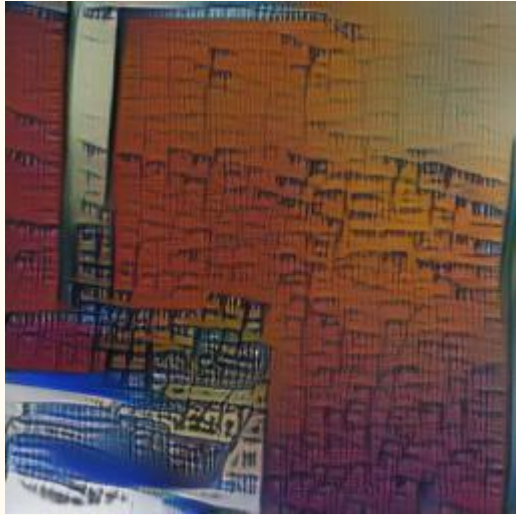
Example: text to image



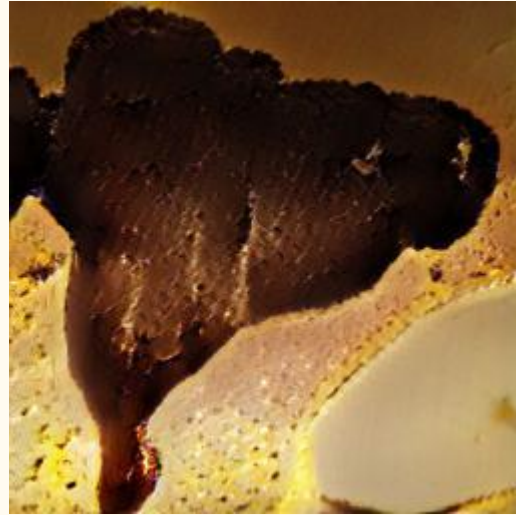
a group of men standing next
to each other



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lush green hillside



Art and artificial intelligence

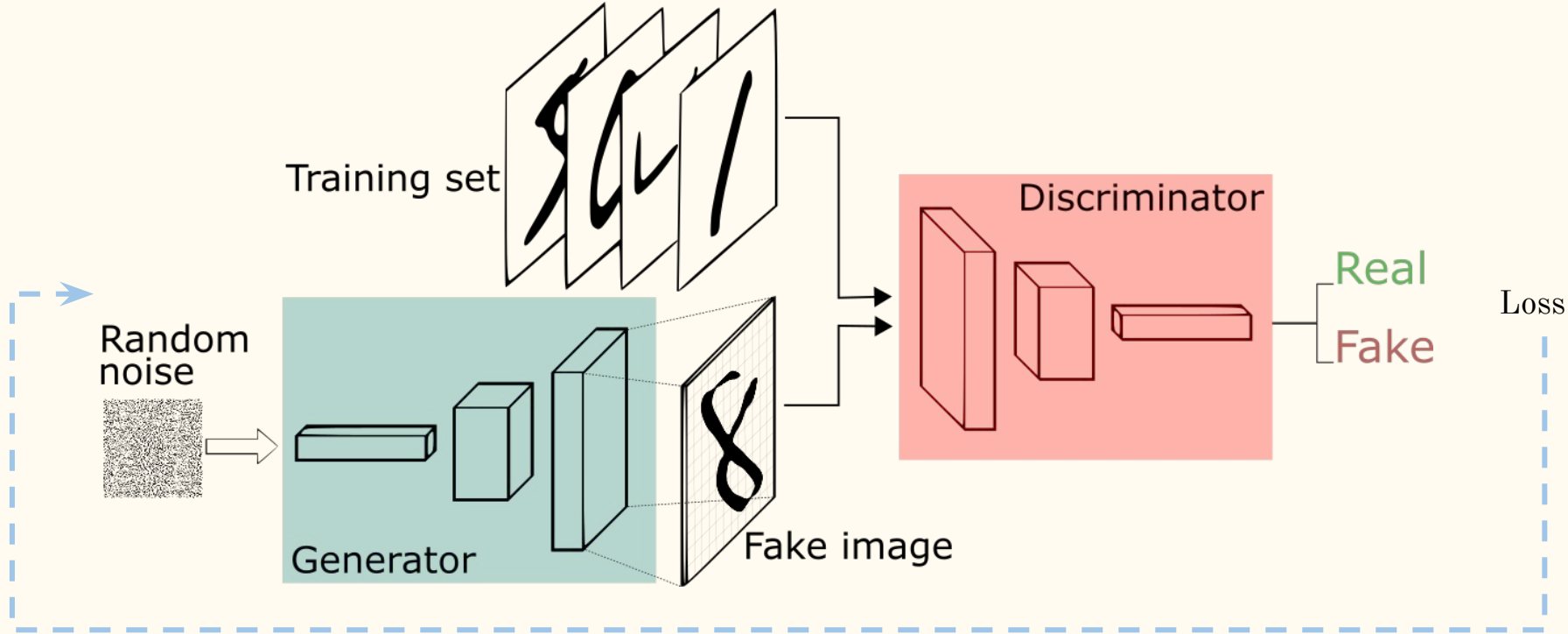


The most beautiful piece of
chocolate cake

Machine Artist and Critic | GAN's



Generative Adversarial Networks (GAN's)







Robbie Barrat: art-DCGAN



Mario Klingemann: Memories of Passersby I

Case Obvious

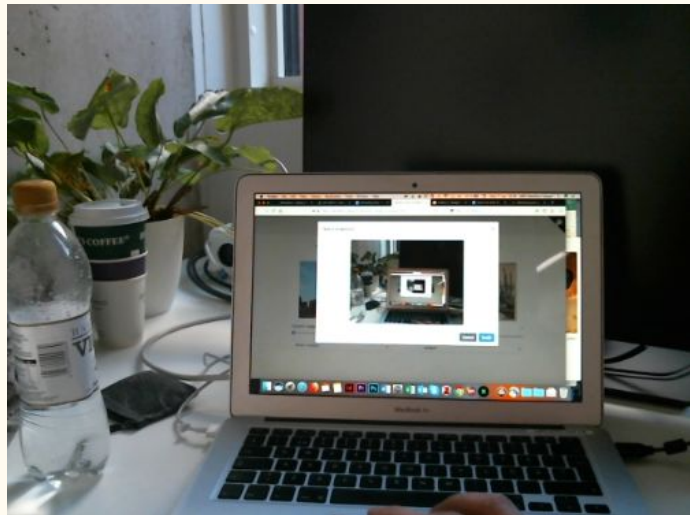
Edmond de Belamy, from La Famille de Belamy (2018)

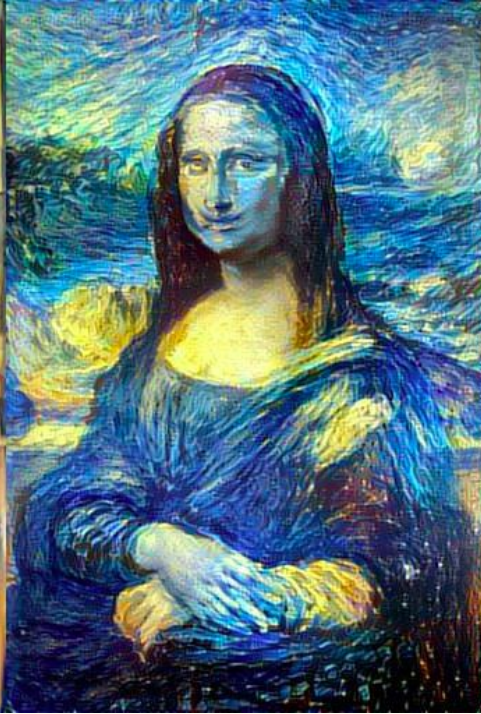


Other image generation methods

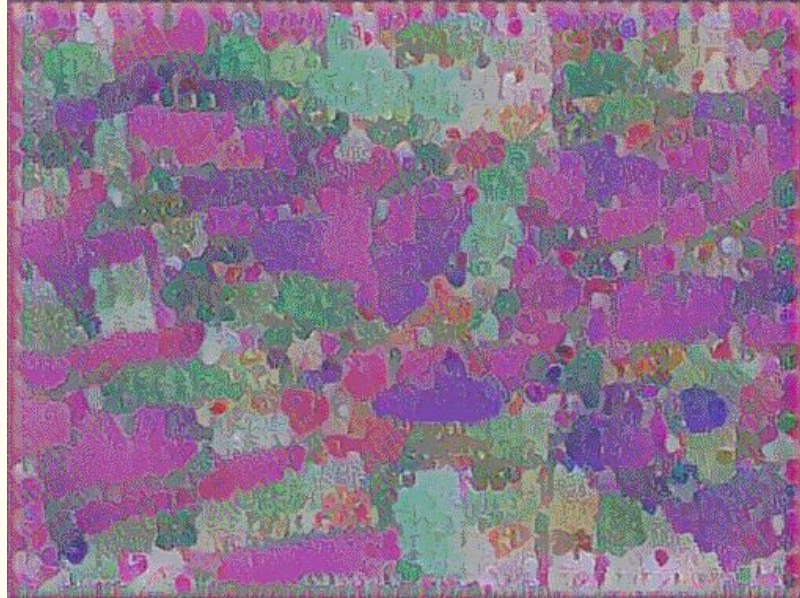
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Style Transfers





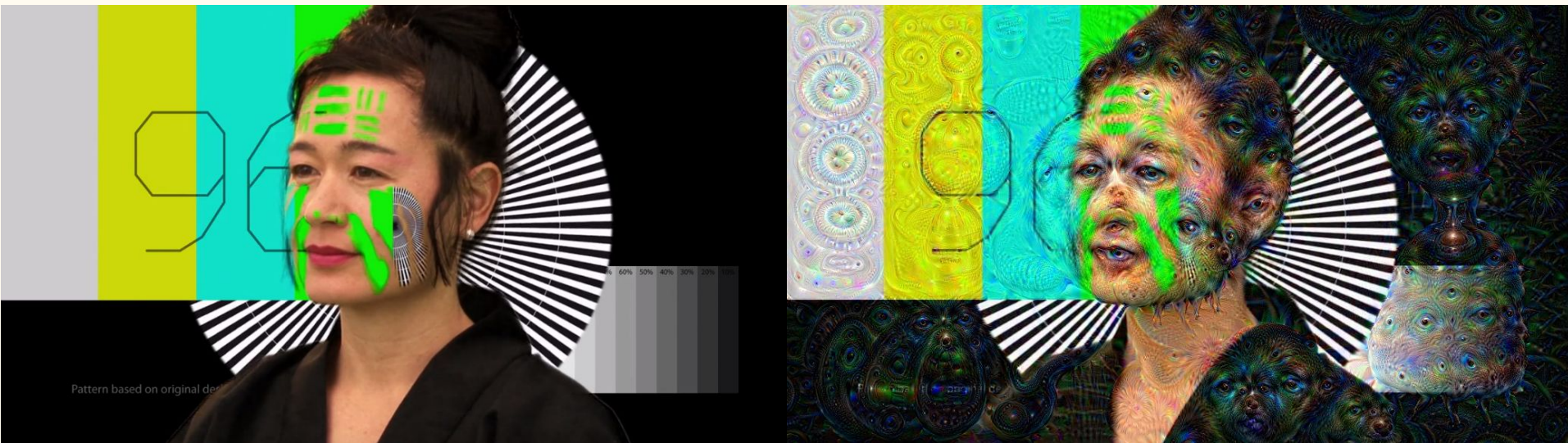


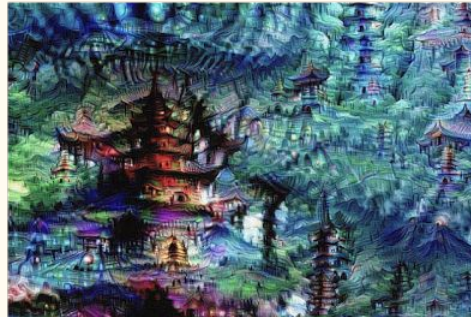
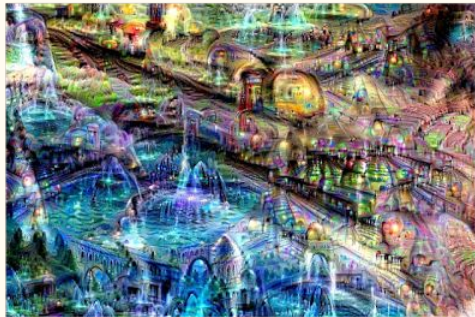
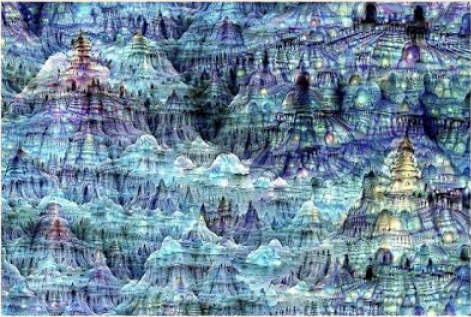


Pix2Pix



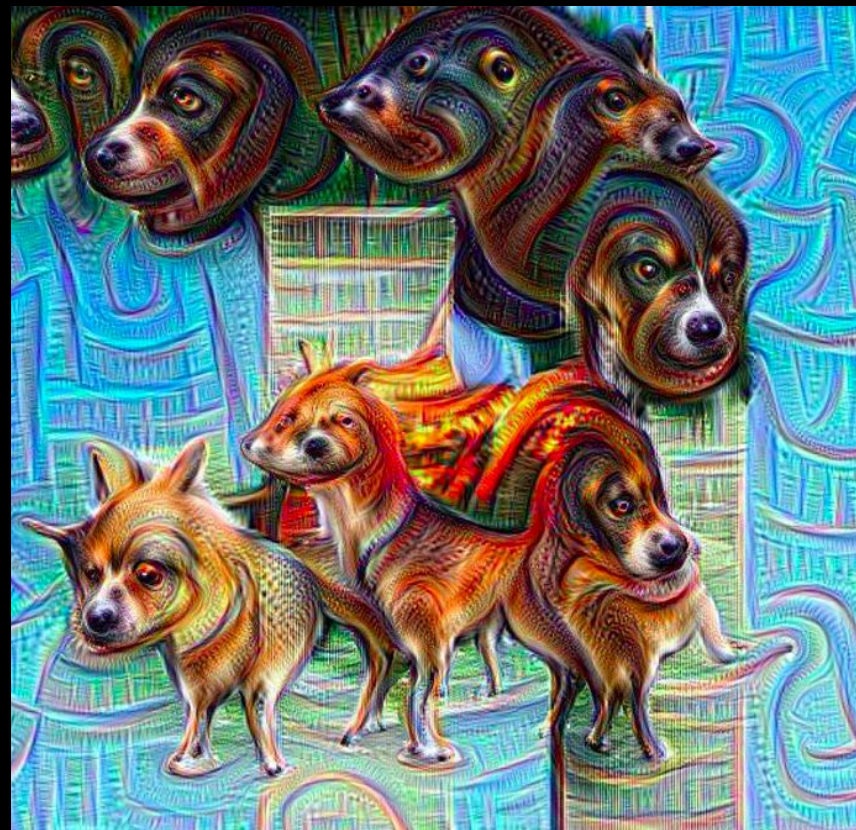
Deep Dream



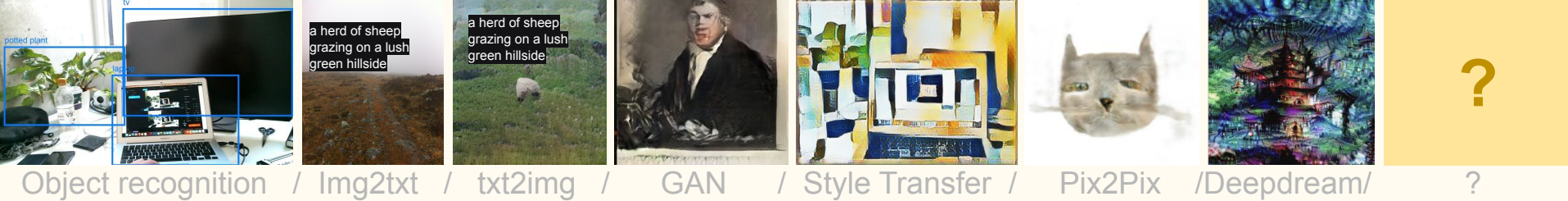


Google's Deep Dream

Kitch or Art?



It's not the tool -
it's how and why
you use it



Exercise

- 1) Select one of the methods mentioned above
- 2) Come up with an idea for artwork using that method
- 3) Argue why you used the selected method, what it brings to your work

AI Art Currents



Anna Ridler



Fall of the House of Usher (2017)

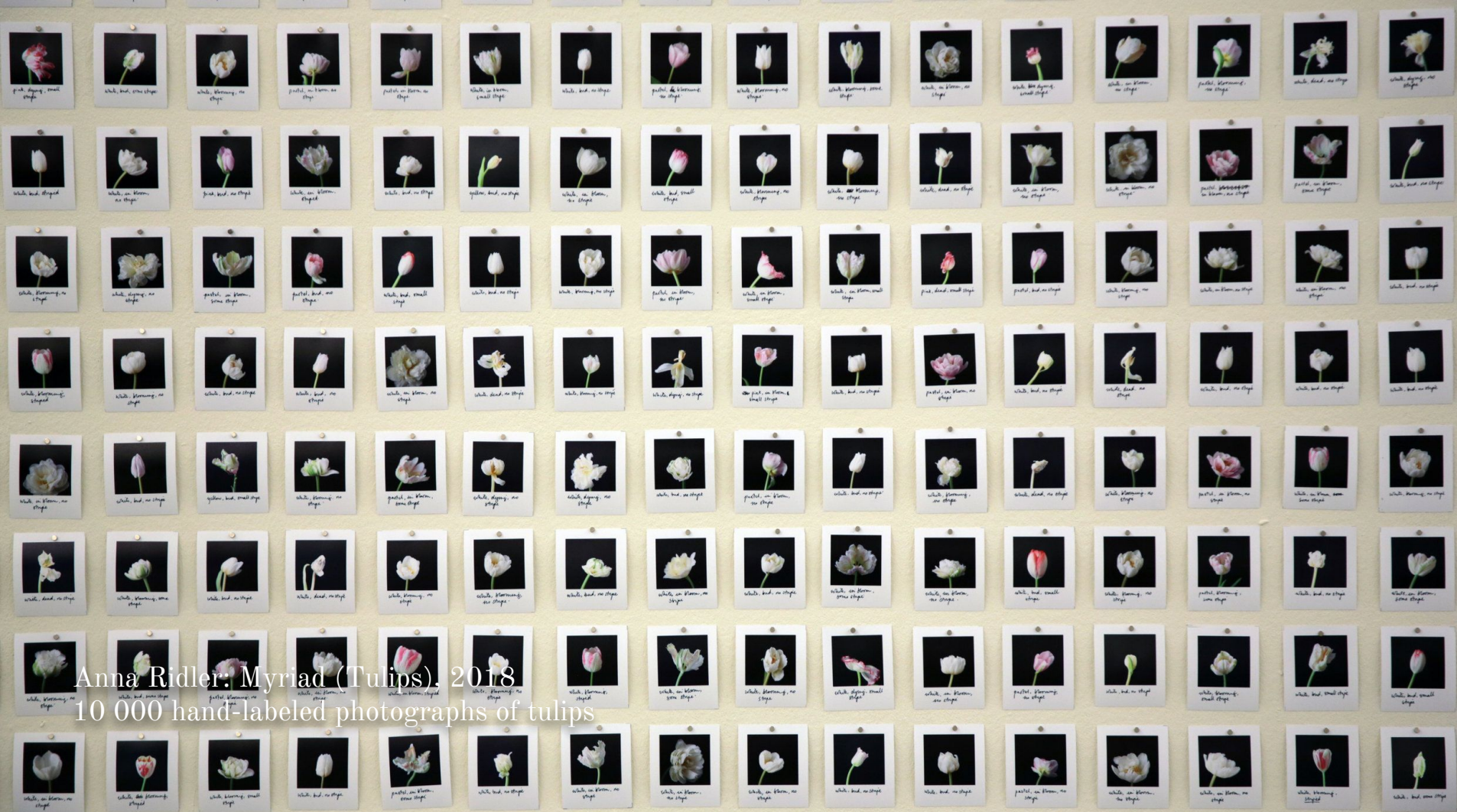
Series of animations made with pix2pix

<http://annaridler.com/fall-of-the-house-of-usher>





Mosaic Virus (work in progress) 2018



Anna Ridler: Myriad (Tulips), 2018
10 000 hand-labeled photographs of tulips

Helena Sarin



Candy Store (2018)



Am I Dali yet? (2018)



Memo Akten: Learning to See



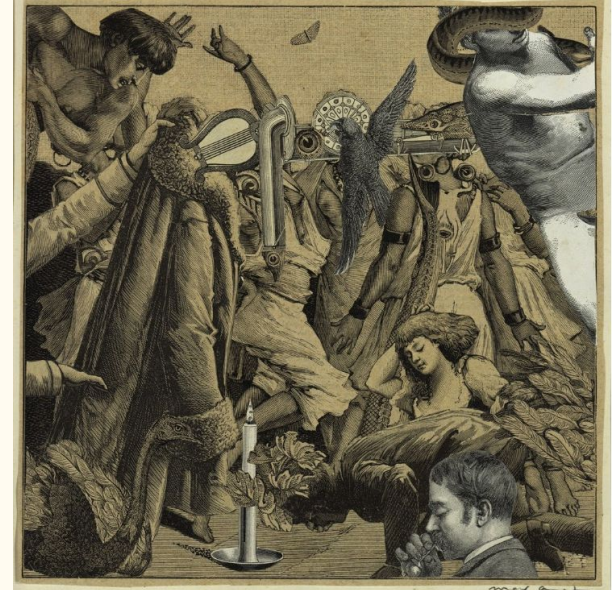
Jake Elwes

Methods of Creation



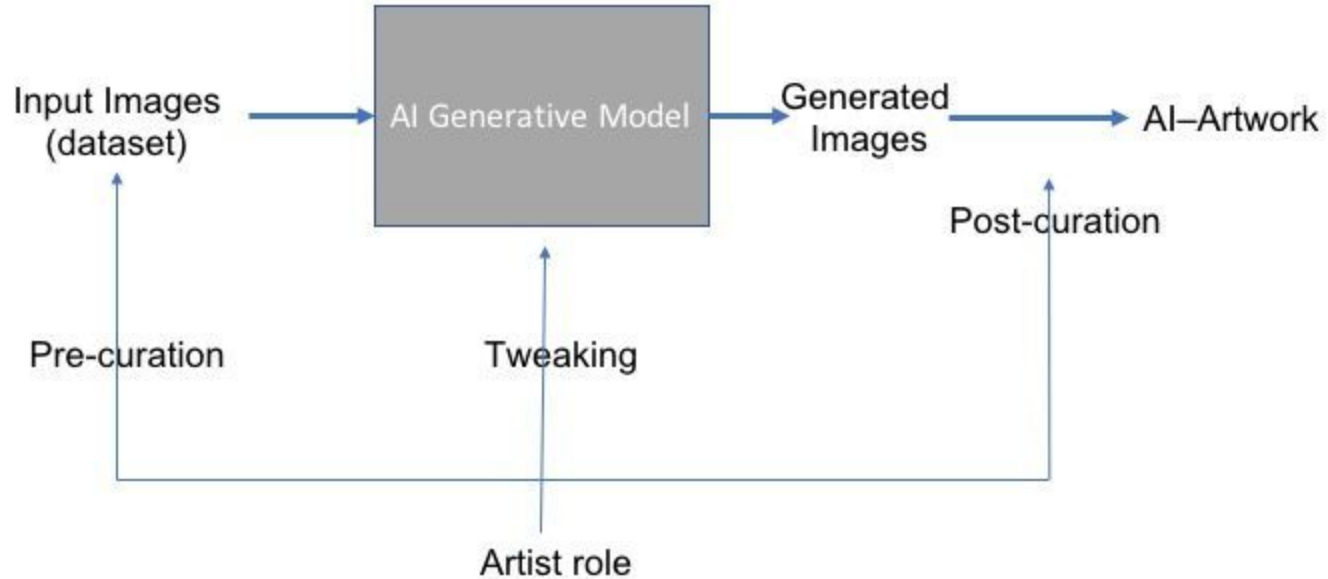
DADA

- After WWI, artists like Max Ernst and Hannah Höch felt the conventional art techniques (painting, sculpture..), felt inadequate in the irrational, chaotic world
- Collage
- Absurd Captions
- Frottage (sheet of paper on top of an object)
- Decalcomania (paper laid over a painted surface and removed)



Max Ernst
Women reveling violently and waving in menacing air, 1929

AI-Art Creative Process



AI Art Creative Process, Ahmed Elgammal.



Europe after the rain II, 1940-1942

Oulipo

- Experimental writing techniques, potential literature
- Create restraints to the writing as a way to find new literature

Raymond Queneau disagreed with the Surrealists refusal to use any constraints or rules in writing, for example producing poetry without meter, rhyme, rhythm or any other defining characteristic. He coined the term “shriek” literature, which he felt was the lazy man's method of producing literature.

- N+7, replace the substantives from the dictionary

<http://www.spoonbill.org/n+7/>

Homework

For tomorrow

Additional read (Interesting links on MyCourses) :

Memo Akten on DeepDreams

Helena Sarin on GANs

Tom White on What algorithmic art can teach us about artificial intelligence

- 1) Create a simple system for art (or image) generation. It doesn't have to be in digital format, it can also be a method of working.
 - 2) Come up with 2 other suggestions for an AI artwork
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