



Future of Computer Graphics & Animation

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What is computer graphics?

Any set of images to be manipulated or creation of the image in the form of pixels. Types:

- 2D
 - raster - using pixels
 - vector - mathematical equations are used to draw different types of shapes, lines, objects)
- 3D (uses mathematics to represent 3d objects)
- Computer animation



2D



3D

What is animation?



An illusion of movement basically by using a series of images.

The frame rate is important for a smooth motion.

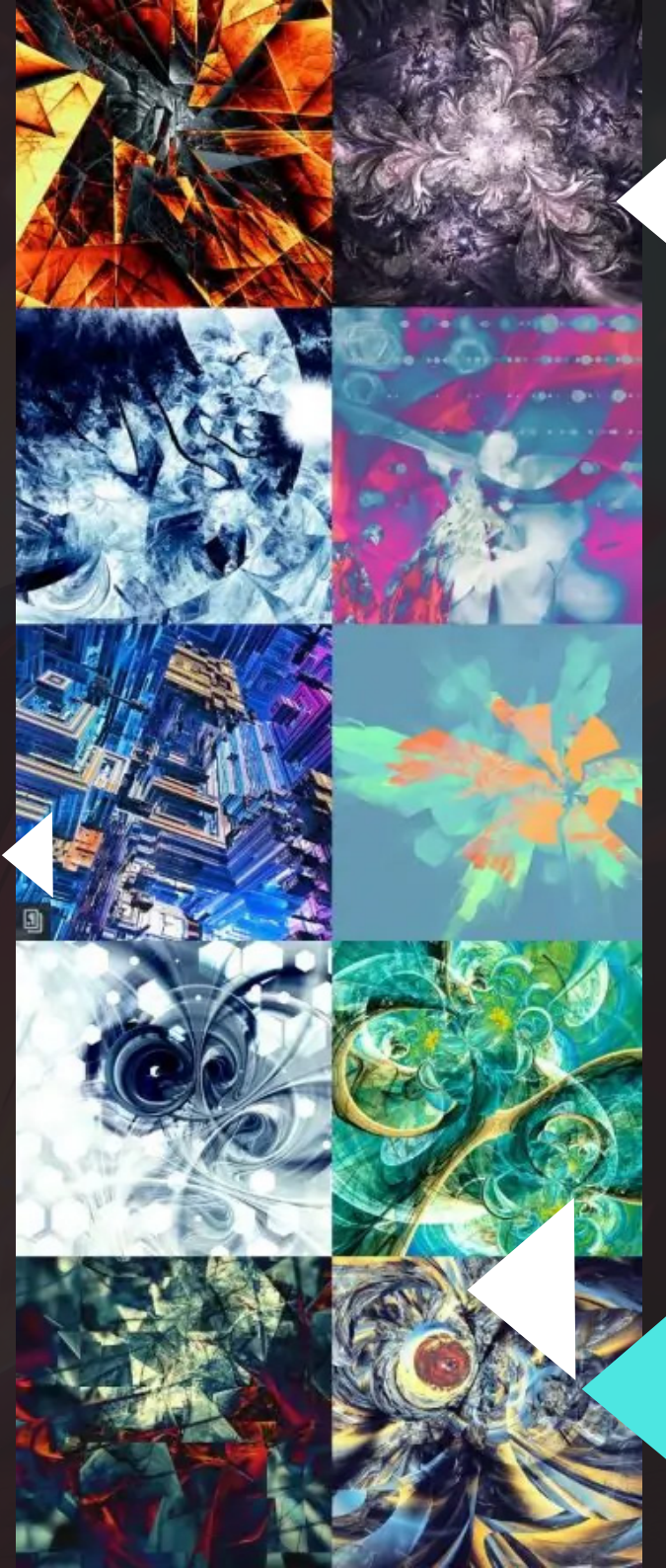


How are they used?

Digital images can be classified according to the number and nature of those samples:

- grayscale
- color
- false-color
- multi-spectral
- thematic

Huge variety of images
= immense field for
implementation





How are they used?

CGI



CGI (Computer-generated imagery) uses computer graphics to create art or media for:

- print
- screen products
- film
- television
- computer games
- simulations
- virtual reality experiences

dynamic images
with no viewer
interaction

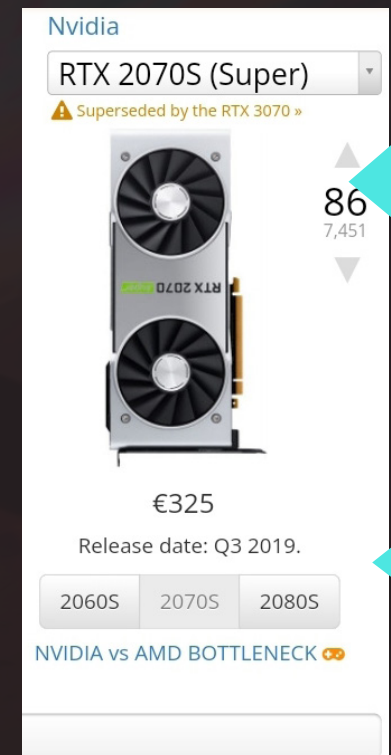
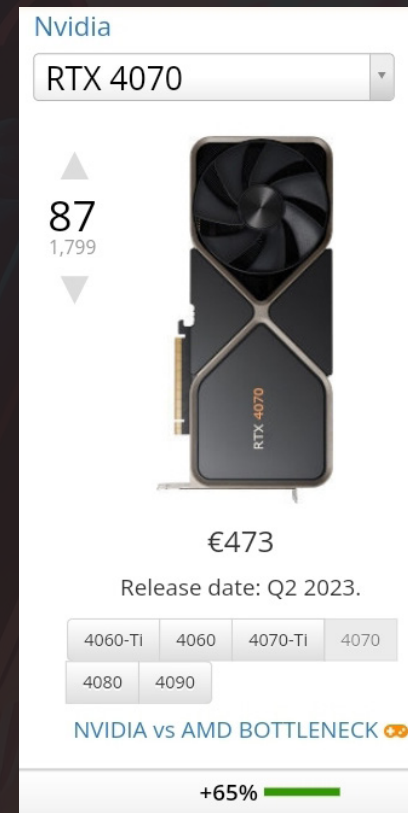




What is the future of computer graphics?



- Faster GPUs
- Quantum computing
- Better neural networks for image enhancement.
- Usage of machine learning for predictive generation of images
- More time- and power efficient algorithms
- More accessibility to ray-tracing and DLSS.
- Real-time rendering of lip movement in game characters





What is the present of animation?





What is the future of computer graphics?

CURRENT TRENDS

- growing interest in animated content for adult audiences
- motion capture
- computer graphics
- visual effects
- virtual reality
- augmented reality

- 3D animation
- VR and AR technologies
- Machine learning
 - denoising
 - motion capture
 - etc.

FUTURE TRENDS



Resources



- motioncue.com
- typesof.com
- coursera.org
- techtarget.com
- boords.com
- spinningclock.com
- studiobinder.com
- businessofanimation.com

"Man never went to the moon, it was all computer graphics"

Computer graphics in 1969:

