

Computer Vision – Thị Giác Máy Tính

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This text is a part of the series *Some Topics in Advanced STEM & Beyond*:

URL: https://nqbh.github.io/advanced_STEM/.

Latest version:

- *Computer Vision – Thị Giác Máy Tính*.

PDF: URL: https://github.com/NQBH/advanced_STEM_beyond/blob/main/computer_vision/NQBH_computer_vision.pdf.

TeX: URL: https://github.com/NQBH/advanced_STEM_beyond/blob/main/computer_vision/NQBH_computer_vision.tex.

- *Advanced STEM students*.

PDF: URL: https://github.com/NQBH/advanced_STEM_beyond/blob/main/teach/student/NQBH_student.pdf.

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1 Basic Computer Vision

2 Wikipedia

2.1 Wikipedia/computer vision

“*Computer vision* tasks include methods for **acquiring**, **processing**, **analyzing**, & understanding **digital images**, & extraction of **high-dimensional** data from real world in order to produce numerical or symbolic information, e.g., in form of decisions. “Understanding” in this context signifies transformation of visual images (input to **retina**) into descriptions of world that make sense to thought processes & can elicit appropriate action. This image understanding can be seen as disentangling of symbolic information from image data using models constructed with aid of geometry, physics, statistics, & learning theory.

Scientific discipline of computer vision is concerned with theory behind artificial systems that extract information from images. Image data can take many forms, e.g. video sequences, views from multiple cameras, multi-dimensional data from a 3D scanner, 3D point clouds from LiDaR sensors, or medical scanning devices. Technological discipline of computer vision seeks to apply its theories & models to construction of computer vision systems.

Subdisciplines of computer vision include **scene reconstruction**, **object detection**, **event detection**, **activity recognition**, **video tracking**, **object recognition**, **3D pose estimation**, learning, indexing, **motion estimation**, **visual servoing**, 3D scene modeling, & **image restoration**.

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” – [Wikipedia/computer vision](#)

3 Miscellaneous