technocamps

Inspiring | Creative | Fun
Ysbrydoledig | Creadigol | Hwyl

Open CV Top Tips

OpenCV, originally developed by Intel, is a large open source C++ library for image processing and computer vision. It has hundreds of built-in functions and algorithms that can be used to perform real-time image processing. As OpenCV has so many built in functions, it makes developing your own computer vision applications easy and you will become more and more confident using it.

You can download OpenCV for free from:
http://opencv.org/downloads.html

The software can be downloaded for either Windows, Mac or Linux.

What is Computer Vision?

Computer vision is the understanding of producing and processing images and image analysis. This field is often linked with technology development and Artificial Intelligence, acknowledging, recognising and interacting with a machine's environment.

Computer vision often looks to replicate how the human eye works, how particular image processing techniques can be created and modelling environments, effects and the mathematics involved when using computer vision systems and software.

Computer vision plays a large role within medical image processing, assisting patient diagnosis, research and enhancing understanding of particular conditions or treatments.

i.t.wales www.itwales.com
Swansea University Prifysgol Abertawe
Prifysgol Aberystwyth University
Prifysgol Bangor University
University of South Wales Prifysgol De Cymru
ESF
Llywodraeth Cymru Welsh Government
Ewrop & Chymru: Buddsoddi yn eich dyfodol
Cronfa Gymdeithasol Ewrop
Europe & Wales: Investing in your future
European Social Fund

Open CV

Function	Description
cv::namedWindow()	Creates a window and gives it a name
cv::imshow()	Displays the window and its content
cv::waitKey()	Pauses the program until user input is received
cv::destroyWindow()	Destroys all created windows
cv::scalar()	Multiplies vectors to increase size
cv::blur()	Blurs the image to remove any noise
cv::size()	Allows to pass the size of a rectangle or an image
cvtColor()	Converts an image from one colour to another

Programming Keywords

Keyword	Description
Function	A block of code that has a name and is reusable.
Parameter	Variable that is passed to a function.
Variable	Storage location with a type and name.
Image Matrix	Way to store image information.
Window	Frame which content is displayed.
Filter	Technique to change look of a image.
Noise	Random variation of brightness or colour in an image.

Don't forget to send us your example projects! We may even feature them on our website or Facebook page!