Guides Index: https://www.pyimagesearch.com/start-here/

Object Measuring

Measuring size of objects in an image with OpenCV

System Optimization

• Multiprocessing with OpenCV and Python

Image Hashing

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- Image hashing with OpenCV and Python
- Building an Image Hashing Search Engine with VP-Trees and OpenCV

Object Detection

- Keras Mask R-CNN
- A gentle guide to deep learning object detection
- Raspberry Pi: Deep learning object detection with OpenCV
- Object detection with deep learning and OpenCV

dlib

- Training a custom dlib shape predictor
- Tuning dlib shape predictor hyperparameters to balance speed, accuracy, and model size

Object Tracking

- OpenCV Object Tracking
- Object tracking with dlib
- Simple object tracking with OpenCV

Google Coral TPU USB Accelerator

- Getting started with Google Coral's TPU USB Accelerator
- Object detection and image classification with Google Coral USB Accelerator

NVIDIA Jetson Nano

- Getting started with the NVIDIA Jetson Nano
- https://www.jetsonhacks.com/

Where to Purchase

- https://www.taiwansensor.com.tw/prod...5%97%e4%bb%b6/
- https://www.robotkingdom.com.tw/prod...developer-kit/
- https://www.taiwaniot.com.tw/product...9%BC%E6%9D%BF/

Raspberry Pi Tutorials

- Building a Raspberry Pi security camera with OpenCV
- Install OpenCV 4 on Raspberry Pi 4 and Raspbian Buster
- Raspberry Pi: Deep learning object detection with OpenCV
- Optimizing OpenCV on the Raspberry Pi
- Remote development on the Raspberry Pi (or Amazon EC2)

OpenVINO with Intel Movidius Neural Compute Stick2 (NCS2)

- OpenVINO, OpenCV, and Movidius NCS on the Raspberry Pi
- Intel Distribution of OpenVINO Toolkit Get Started

Liveness Detection with OpenCV

https://www.pyimagesearch.com/2019/0...n-with-opencv/

Deep learning, hydroponics, and medical marijuana ?????????

https://www.pyimagesearch.com/2018/1...cal-marijuana/

• Keras + Train CNN

Keras Tutorials

- Keras: Starting, stopping, and resuming training
- Keras Learning Rate Finder
- Cyclical Learning Rates with Keras and Deep Learning
- Fine-tuning with Keras and Deep Learning
- Keras: Feature extraction on large datasets with Deep Learning
- Fashion MNIST with Keras and Deep Learning
- How to use Keras fit and fit_generator (a hands-on tutorial)
- Keras Conv2D and Convolutional Layers
- Auto-Keras and AutoML: A Getting Started Guide
- Regression with Keras

Regression enables us to predict continuous values, such as house price prediction or stock market forecasting.

Keras: How to get started with Keras, Deep Learning, and Python

https://www.pyimagesearch.com/2018/0...ng-and-python/

- 1. Installing Keras and other dependencies on your system
- 2. Loading your data from disk
- 3. Creating your training and testing splits
- 4. Defining your Keras model architecture
- 5. Compiling your Keras model
- 6. Training your model on your training data
- 7. Evaluating your model on your test data
- 8. Making predictions using your trained Keras model

Deep Learning and Medical Image Analysis with Keras ????????

https://www.pyimagesearch.com/2018/1...is-with-keras/

- ResNet
- SGD optimizer
- ???????? train, validation, test ????
- Data Augmentation
- Decay learning rate after exch epoch