

How computers learn to recognize objects instantly

Ten years ago, computer vision researchers thought that getting a computer to tell the difference between a cat and a dog would be almost impossible. Now we can do it at a level greater than 99 percent accuracy. This is called image classification.

Darknet, is a neural network framework for training and testing computer vision models that throws a specific breed of predictions. Perfect if you want to build a system on top of computer vision, like a self-driving vehicle.

Object detection systems works taking an image and splitting it into a bunch of regions and then running a classifier on each of these regions. High scores for that classifier would be considered detections in the image, involved running a classifier thousands of times over an image. Different from old systems, Darknet produces all of the bounding boxes and class probabilities simultaneously, and is not limited to images; it can process video in real time.

Darknet is a general purpose object detection system. The same code used to find stop signs in a self-driving vehicle, can be used to find cancer cells in a tissue biopsy. Darknet is open source so anyone can take it and build something with it.