Welcome to ineuron.ai

End to End Object Detection

Description:

Become an Object Detection Guru with the latest frameworks available like Tensorflow, Detectron2 and Yolo. In this course you will be learning to create four different object detector using multiple frameworks from scratch.

Start Date:

Doubt Clear Time:

Course Time:

Features:

Lifetime Dashboard Access

Certificate

End to End Project

Self paced classes

What we learn:

Python Basics

Flask Development

Pycharm Basics

Debug Applications

Tensorflow1.x Object Detection

Tensorflow2.x Object Detection

Detectro2 Object Detection/Segmentation

Yolo Object Detection

Working with Images

Working with Videos

Requirements:

Computer with Internet Connectivity

Basic Python Knowledge

8GB RAM preferred

Intel Core i5 preferred

Windows/Linux/MAC Preferred

Instructor:

Name:

Sourangshu Pal

Description:

Visual Computing Engineer and instructor at iNeuron.ai having 3 years of diverse experience in the discipline of visual computing with specialization in Deep Learning and Computer Graphics. Loves to analyze, process, and model visual data

then interpret the insights to create actionable plans for solving challenging business problems.

>Introduction to Course:

>>Introduction to Course

>>Who is this Course for?

>>Course Overview

>>Course Outcome

>>Installing Anaconda, Pycharm & Postman

>>Working with Conda Envs

>>Pycharm Introduction

>>Pycharm with Conda

>>Pycharm with venv

>>Pycharm with Pipenv

>Covering Python Basics:

>>Introduction

>>Building a Calculator

>>Working with Command Line Arguments

>>Building the Flask Application

>>Testing our App in POSTMAN

>>Learn to Debug with Pycharm

>>Adding an UI to our Web App

>Understand Object detection

theoritically:

>>Introduction

>>What is Object Detection?

>>What are Bounding Boxes?

>>Metrics used in Object Detection

>>Applications of Object Detection

>Object Detection using Tensorflow 1.x:

>>Introduction

>>Introduction to TFOD1.x

>>Using Google Colab with Google Drive

>>Installation of Libraries in Colab

>>TFOD1.x Setup in Colab

>>Visiting the Model Zoo

>>Inferencing in Colab

>>Inferencing in Local

>>Important Configuration Files

>>Webcam Testing

>Training a Custom Mask Detector using Tensorflow1.x:

>>Introduction

>>Our Custom Dataset

>>Doing Annotations or labeling data

>>Preparing the Dataset for Training

>>Selection of Pretrained Model from Model Zoo

>>Files Setup for Training

>>Let's start Training

>>Resume or Stop Training

>>Converting CKPT to Frozen Inference Graph

>>Inferencing with our trained model

>Creating an End To End Mask Detector Web Application with TFOD1:

>>Introduction

>>Creating a Pycharm project & Environment Setup

>>Debugging our Application

>>Testing our App with PoSTmaN

>>Adding an UI to our Web APP

>Object Detection using Tensorflow 2.x:

>>Introduction

>>Introduction to TFOD2.x

>>Installation of Libraries in Colab

>>Visting TFOD2.x Model Garden

>>Inference using Pretrained Model

>>Important Configuration Files

>>Inferencing in Local with a pretrained model

>Training a Custom Chess Piece Detector using Tensorflow2:

>>Introduction

>>Our Custom Dataset

>>Doing Annotations or labeling data

>>Preparing the Dataset for Training

>>Selection of Pretrained Model from Model Zoo

>>File Setup for Training

>>Let's start Training

>>Stop Training or resume Training

>>Convert CKPT to Saved Model

>>Inferencing using the Custom Trained Model in Colab

>>Inferencing using the Custom Trained Model in Local PC

>Creating an End To End Chess Piece Detector Web Application with TFOD2:

>>Introduction

>>Creating a Pycharm project & Environment Setup

>>Building a Flask Application

>>Debugging our Application

>>Testing our App with PoSTmaN

>>Adding an UI to our Web APP

>Object Detection using Detectron2:

>>Introduction

>>Introduction to Detectron2

>>Installing libraries in Google Colab

>>Visiting the Model Zoo

>>Inferencing using Pre Trained Model

>Training a Custom Detector using Detectron2:

>>Introduction

>>Our Custom Dataset

>>Doing Annotations or labeling data

>>Registering Dataset for Training

>>Selection of Pretrained Model from Model Zoo

>>Let's start Training

>>Stop Training or resume Training

>>Inferencing using the Custom Trained Model in Colab

>>Evaluating the Model

>Creating an End To End Custom Detector Web Application with Detectron2:

>>Introduction

>>Creating a Pycharm project & Environment Setup

>>Building a Flask Application

>>Debugging our Application

>>Testing our App with PoSTmaN

>>Adding an UI to our Web APP

>Object Detection using YoloV5:

>>Introduction

>>Introduction to YoloV5

>>Inferencing using Pre Trained Model

>Training a Custom Warehouse Apparel Detector using YoloV5:

>>Introduction

>>Our Custom Dataset

>>Doing Annotations or labeling data

>>Preparing the Dataset for Training

>>Let's start Training

>>Inferencing using the Custom Trained Model in Colab

>Creating an End To End Warehouse Apparel Detector Web Application with YOLOV5:

>>Introduction

>>Creating a Pycharm project & Environment Setup

>>Building a Flask Application

>>Debugging our Application

>>Testing our App with PoSTmaN

>>Adding an UI to our Web APP