XALTIUS
Towards Higher Excellence

It's all about images!

Computer Vision using Python

With the basic knowledge of python and a love for images, learn how coding, machine and deep learning put together can help you build technologies like face detection, object recognition and many others.

www.xaltiusacademy.com

Start your data science journey with us.

Basic knowledge of Python is required to attend this course.

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A short course in 16 hours.

What You'll Learn

The workshop will provide an overview of Image Processing and Computer Vision using Open CV and Python. It will cover the basics of how to deal with images, different operations on images and also how TensorFlow and deep learning can be leveraged for computer vision applications.

Learn how you can put your images to good use.

About the Course

These are the key takeaways that participants will gain:

- Understand the basic concepts of Image Processing
- Different features in a image
- How to do Object Segmentation
- Basics of Deep Learning techniques
- Neural Networks concepts
- What is TensorFlow?
- How to write deep learning algorithms
- Learn how to optimize performance

It's about your goals & your future!

Contact us | info@xaltius.tech or +65 8303 9150 / +65 9138 9813

Course Outline

Module 1: Introduction to Image Processing and OpenCV

Understand the basics of image processing and features. This module also includes OpenCV and its application to computer vision.

- Basics of Image Processing
- Understanding Image Features
- Introduction to functions of OpenCV
- Object Segmentation and Detection
- Labs using OpenCV

Module 2: Introduction to Neural Networks and Deep Learning

The objective is to introduce the key concepts of behind deep learning and introduction to the basic mathematics involved.

- Basics of Deep Learning Techniques
- Basics of Neural Networks
  - Back Propagation
  - Activation, Loss, Optimization Functions
  - Parts of a model, Hidden layers
- Convolutional Neural Networks
  - Basics of different layers

Module 3: Introduction to TensorFlow

This module covers the basics of TensorFlow and how it can be used to build neural network models from scratch for various use cases.

- Basics of TensorFlow
- Labs to solve business use cases

Module 4: Computer Vision using Tensorflow and Deep Learning

This module introduces how deep learning algorithms can be used to model various Computer Vision cases such as Object Recognition , Segmentation.

- Introduction to Computer Vision
- Introduction to Deep Neural Networks and its Biological Inspiration
- Building and Classifying Images with DNNs
- Incorporating DNNs for object detection
- Optimizing performance of Deep Neural Networks

Join us & launch your career in data science.

It's time to upskill for the Industry 4.0

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