

Development of Computer Vision Systems and Machine Learning Applications

Training Course **Development of Computer Vision Systems and Machine Learning Applications**

Course Language: **English**

Course Duration **Total Number of hours: 21**

Course Objectives

It is possible to develop a face recognition application and use it with other applications such as access control and security system. Interfacing the computer to the Arduino board is included for broader scope of physical applications. ALL of the used Software are under General Public License.

Course Content

Course Key Topic Area Includes:

- **Session 1:** Overview + Programming Review.
- **Session 2:** Image processing.
- **Session 3:** Working with still images and live stream from cameras.
- **Session 4:** Face Detection (single and multi).
- **Session 5:** Face Recognition (single and multi).
- **Session 6:** Introduction to Arduino board and serial interfacing to the PC.
- **Session 7:** Complete computer vision project implementation.

Learning Outcomes

At the end of the program the trainees will be able to:

- Create an interactive application that can detect and recognize people faces.
- Understand the basic use of Arduino
- Know how to make serial interfacing between PC and Arduino
- Create access control application using face recognition from end-to-end

Target Audience

- Any Background (Students, Professional or Academicians) with basic programming skills

Course Material /Technology used/ Details Relevant to the course.

Presentation Slides
Any PC with any Cam
SharpDevelop IDE (GNU)
Arduino IDE (GNU)
Arduino Board

Instructor Details & Brief Instructor Bio

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