

LET'S EXPLORE CV

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TARGET PARTICIPANTS:

Students from any Discipline
Research Scholars / Faculty

DATE / TIME:

1st, March 2025 - (Saturday)

9.30 am to 5.30 pm

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Organized by :

TIFAC- CORE in AUTOMOTIVE INFOTRONICS
(Sponsored by Department of Science and
Technology, Govt. of India)

Convenor :

Dr. Elangovan.D, Deputy Director, TIFAC

Co - ordinators :

Ms. H N Gayathri, Technician, TIFAC

Mr.Silambarasan R, Development Engineer, TIFAC

TIFAC CORE - VIT Vellore



0416-220-2381/83



tifaccorevit@vit.ac.in



No:701, Technology Tower,
7th floor, VIT Vellore.

Registration details:

- Students and Research Scholars- Rs.150/-
(excluding GST)
- Faculty- Rs.500/- (excluding GST)
- Certificate will be issued.

For registration click below:



<https://events.vit.ac.in/>

VENUE:

Room No.: **703, Technology Tower, 7th
Floor, TIFAC Lab, VIT Vellore.**

INTRODUCTION TO COMPUTER VISION WITH PYTHON & OPENCV



WORKSHOP IN TIFAC CORE

Vellore Institute of Technology

OUTCOMES:

By the end of the 8-hour course, you will:

1. Understanding the basic Computer Vision concepts.
2. Performing common image and video processing tasks using OpenCV.
3. Implementing simple object and face detection models.
4. Gaining hands-on coding experience in PyCharm or Jupyter Notebook.

NEEDS:

Tools and resources used:

- **Software:** PyCharm (or Jupyter Notebook).
- **Dependencies:** OpenCV, NumPy.
- **Dataset:** Sample images.
- **Hardware:** A computer with a webcam (optional for video modules).

Pre-install/download if required:

- Laptop
- Web Camera
- Pycharm installation
- Some sample videos & pictures
- YOLO (You Look Only Once) - related files like YOLO weights: YOLOv3 weights, YOLO configuration: YOLOv3 config, COCO names (class labels): [coco.names](#)

Note : These requirements are optional to keeping it ready though you will be taught how to do install & setup from the basics (for beginners).

MODULES COVERED:

- 1. Introduction to Computer Vision and Setup**
- 2. Image Basics and Transformations**
- 3. Drawing and Image Processing**
- 4. Working with Videos**
- 5. Face Detection with Haar Cascades**
- 6. Real-Time Object Detection (BONUS)**

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The eye sees the world, but vision teaches the machine to understand it.

WHY US ?

TIFAC CORE Focuses On

- Sustainable Mobility
- Renewable powered EV charging infrastructure.
- Advanced Driver Assistance System.
- AI based Driverless Cars for Indian Roads.
- Sub-system development related to Electric Mobility.



Discussion session



Hands-on Exposure to Projects



Internship Opportunities



Project Guidance