



PIXELCRAFT

AN IMAGE PROCESSING WORKSHOP









PIXELCRAFT

(An Image Processing Workshop)

Description:

"PIXELCRAFT" is an image processing workshop. In two days, we will teach you how to play with pictures using Python. On Day 1, we'll start with the basics of Python and show you how to use cool tools like NumPy and OpenCV. You'll learn how to mess around with images and make them look awesome with filters.

Day 2 gets even more exciting! We'll show you advanced tricks like making pictures clearer and separating objects in images. And the best part is we'll have a fun project where students will get to show off what they have learned. You'll compete with others to make the coolest image project and win cool prizes. We will tell them to send the task files via mail. After judging all the tasks, we will declare a winner based on what they have done.

PixelCraft is all about hands-on fun and creativity.

Minimum requirements to attend the workshop:

- Laptop (i3 processor with 4GB RAM)
- Update your browser to the latest version (Chrome, Firefox, Brave)
- Basic understanding of programming concepts.
- Familiarity with the Python programming language is recommended.
- Access to a laptop with a minimum requirement (i3 processor with 4GB RAM).
- Installation of VS-Code and Jupyter Notebooks for interactive Python coding (installation instructions will be provided prior to the workshop).

Outcome:

After attending PixelCraft - Invicta 2024's Image Processing Workshop, participants will:

- 1. Gain a solid understanding of Python programming language and its application in image processing.
- 2. Master essential libraries such as NumPy and OpenCV for handling and manipulating images.
- 3. Acquire proficiency in basic and advanced image processing techniques, including filtering, enhancement, segmentation, and feature extraction.
- 4. Develop practical skills in building image processing applications.

- 5. Explore real-time image processing using a webcam for interactive experiences.
- 6. Gain confidence in their abilities to tackle image processing tasks and projects independent

Instructions:

- Avoid mishandling or damaging any lab equipment, if any such act is found, you'll be liable to fine
- Avoid unnecessary noise such as loud conversations or phone calls during workshop sessions
- Keep the lab environment clean and organized.

