

Mining Data from Images

CALCULATING REGIONS OF INTEREST (ROI) IN AN IMAGE



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Module Overview



Understand Data Mining and Image Processing

Introduce OpenCV with Python

Learn how to read, write, and display images with OpenCV

Access and modify pixel values

Implement a simple region of interest

Understanding Data Mining and Image Processing

Data Mining and Image Processing



Data Mining:

The process of discovering useful information from large sets of data.



Image Processing:

The process of enhancing or discovering useful information from an image.



Image Mining:

The process of enhancing or discovering useful information from a large set of images.

Reading, Displaying, and Writing Images

OpenCV

A library of programming functions mainly aimed at real-time computer vision and image processing.

Accessing and Modifying Pixel Values

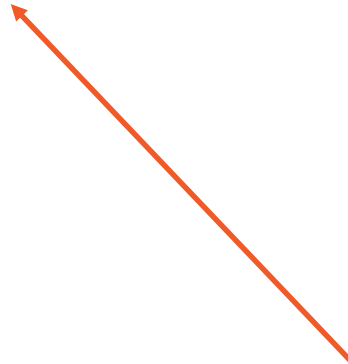
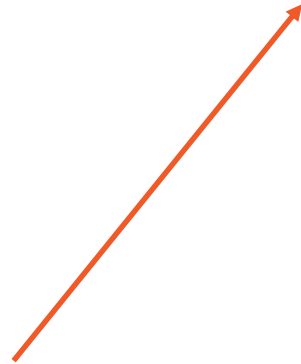
Understanding Images as Arrays

img.shape = (600, 400, 3)

Vertical pixel
location

Horizontal pixel
location

BGR color
value of pixel



Implementing a Region of Interest

Region of Interest (ROI)

Specific areas or regions within a data set that are identified for a particular purpose.

Summary



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