IMAGE ANNOTATION TOOL

 Image Annotation Simplified

OUR TEAM

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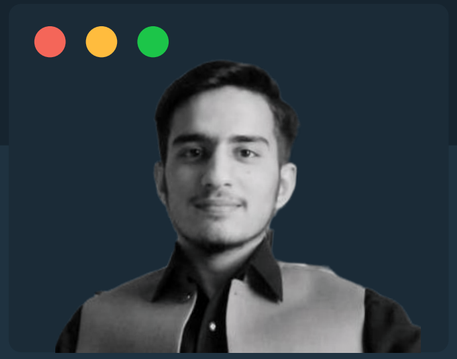

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01 INTRODUCTION TO IMAGE ANNOTATION

 The process of adding metadata, such as labels or bounding boxes, to images, providing valuable information for machine learning models.

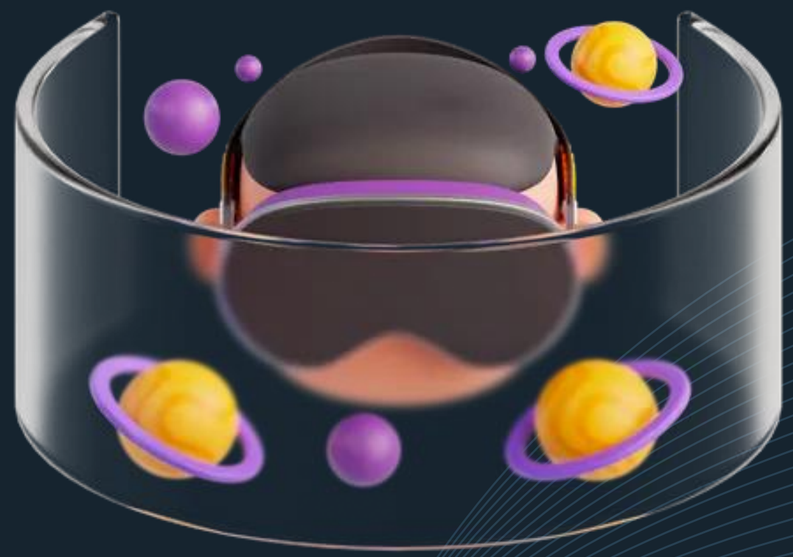
BASICS OF IMAGE ANNOTATION

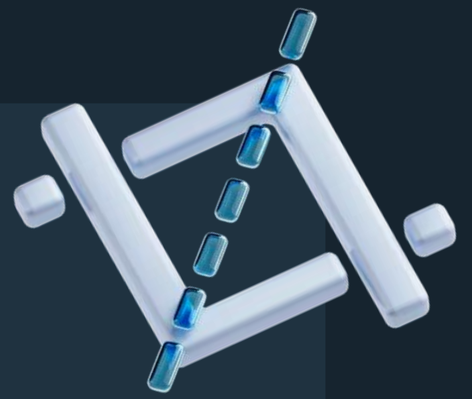
A newborn learns to recognize objects and people by being exposed to the world, a machine learning model "learns" from annotated images.

DID YOU KNOW?

Significance of Image Annotation in Computer Vision.

Image annotation is a fundamental process in computer vision, and its accuracy significantly impacts the performance of machine learning models.





02 Project Overview: Imag Annotation Tool

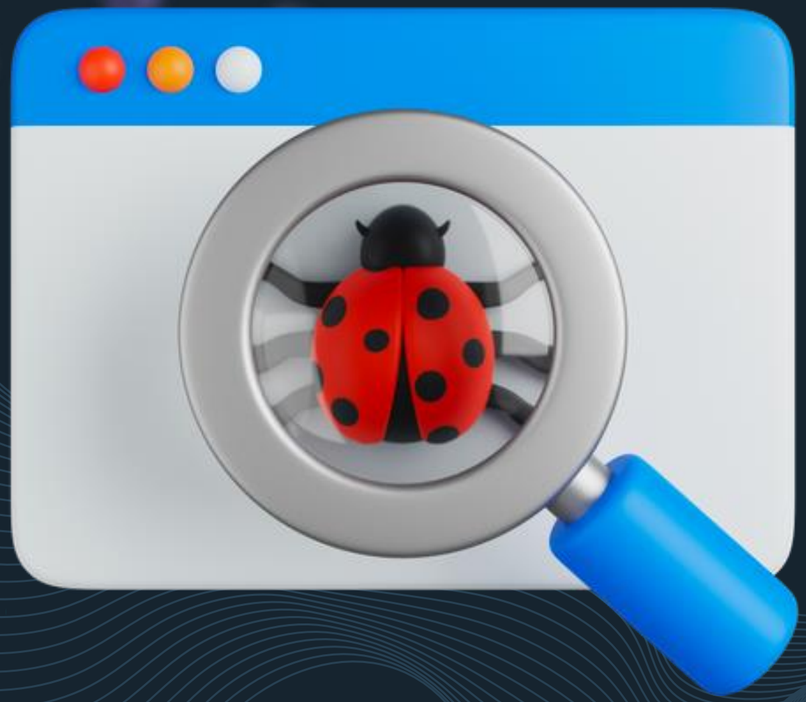
 Image Annotation Simplified

Project Overview

- Create a User-friendly **Image Annotation Tool**.
- Users can open images, create bounding boxes around objects, and classify them as animals, Humans, and cars.
- Provides a graphical user interface for ease of interaction.

03 Importance of Image Annotation.

<p> Image Annotation serves as the foundation for applications like **object detection**, **image segmentation**, and **facial recognition**, fostering advancements in AI across diverse industries. <p>



Object Detection:

Description:

- Identifying and locating objects within images or videos.

Data Points:

- Precisely annotated bounding boxes around objects.
- Class labels to each annotated object (e.g., "Car," "Person").

FACIAL RECOGNITION

Description:

- Identifying and verifying individuals based on facial features.

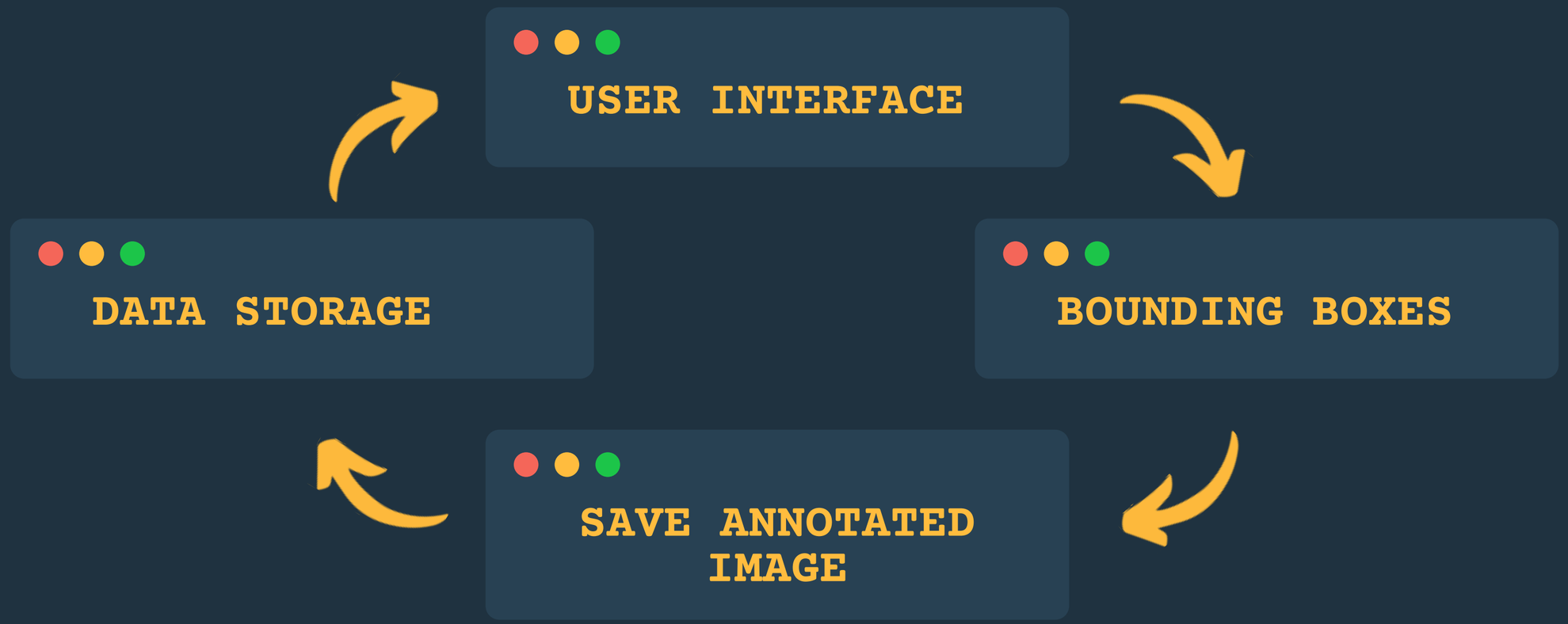
Data Points:

- Precise annotation of facial landmarks.
- Identification of facial regions for expression analysis.

04 PROJECT DETAILS

<p> Our project creates a user-friendly Image Annotation Tool in Python, facilitating object classification through bounding boxes, with data and annotations saved systematically. <p>

SYSTEMATIC FLOW CHART:



User Interface:

- Open the image with one click
- Allows Users to save Annotated images.
- Making Annotation Efficient.

Bounding Boxes:

- Heart of our tool.
- Users can draw Bounding boxes around objects.
- Different Classes i.e Animal, Human, Car.

Save Annotated Image:

- Allowing users to save annotated images.
- Save images for later use and sharing.
- Data Is readily available.

Data Structure:

- Annotated image data is stored as:
    1. Image
    2. Text File
- Annotated data is stored in new folders.

LIBRARIES USED

Pillow

Easy-to-use methods for opening, manipulating, and saving various image file formats.

OS

Offering functions for file and directory manipulation, process management

Tkinter

Enabling the creation of desktop applications and interactive GUI.

Py-installer

Python scripts into standalone executable files.

Project Folder Tree

Image Annotation Tool

GUI Buttons

Bounding Box Saver

Class Selector

GITHUB REPOSITORY

https://github.com/Shameerisb/Anotator

DEMO

REFERENCES:

https://pillow.readthedocs.io/en/stable/

https://docs.python.org/3/library/os.html

https://docs.python.org/3/library/tkinter.html

https://pyinstaller.org/en/stable/