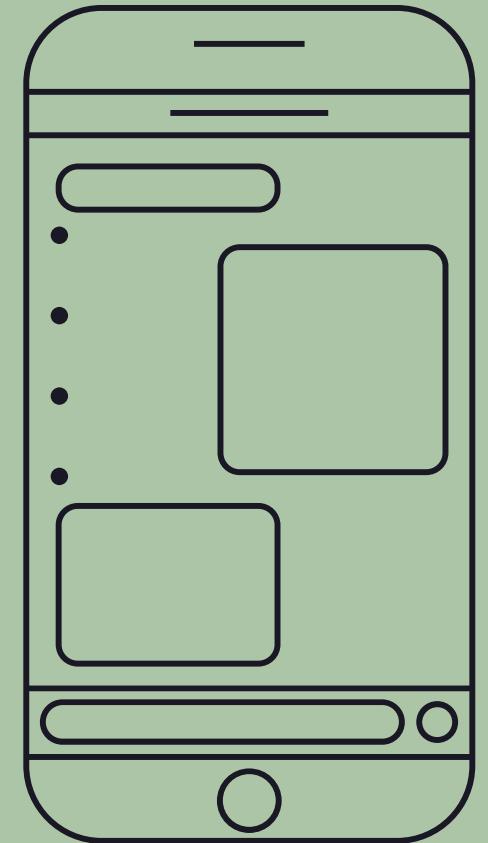


IMAGE ANNOTATION TOOLBOX

DATA FOUNDATION SYSTEMS

DepthFirstSearch



PUNNAVAJHALA GNANA PRAKASH

2021111027

LOSETTI MOURYA

2021101121

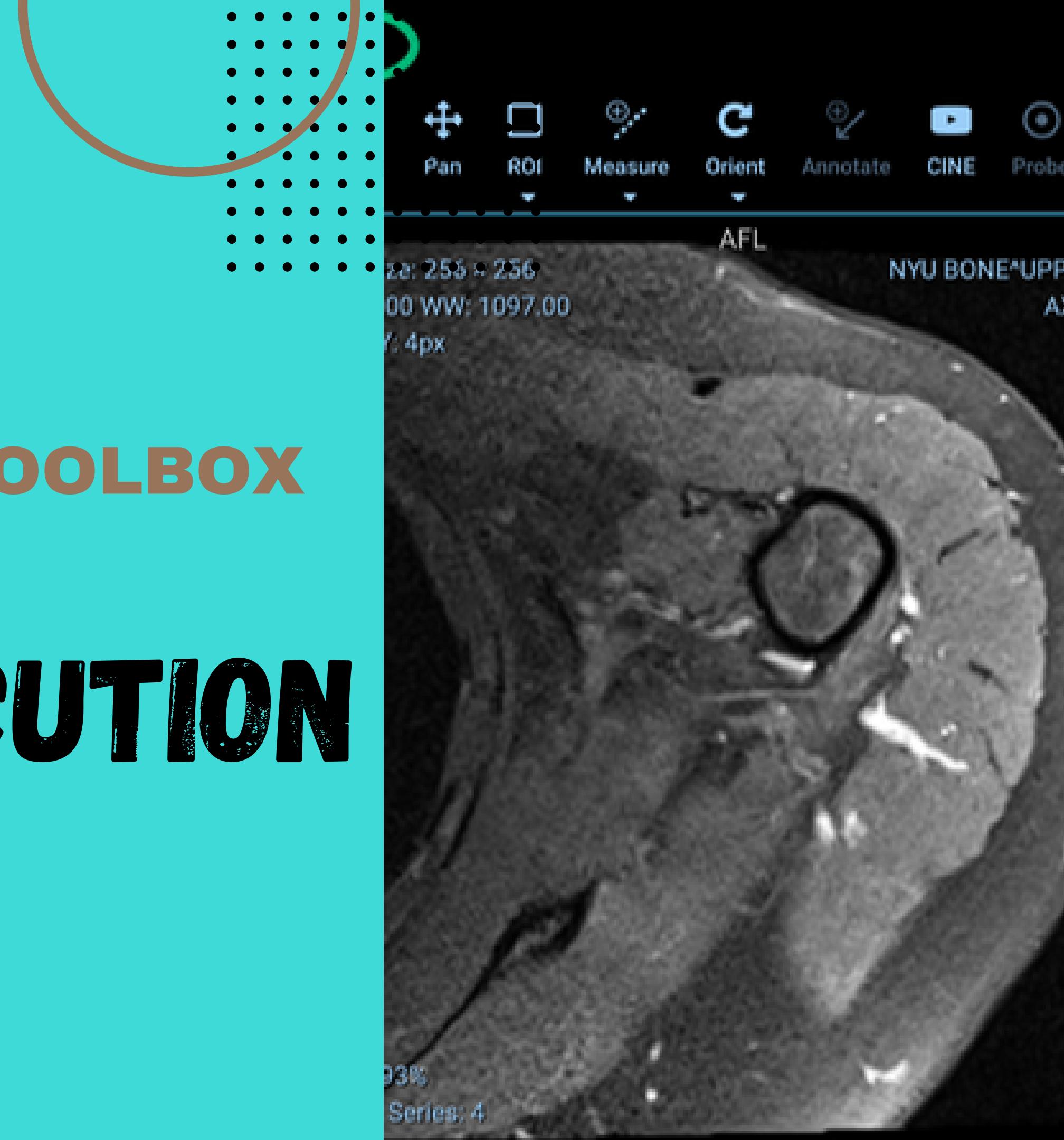
GOWLAPALLI ROHIT

2021101113

DepthFirstSearch

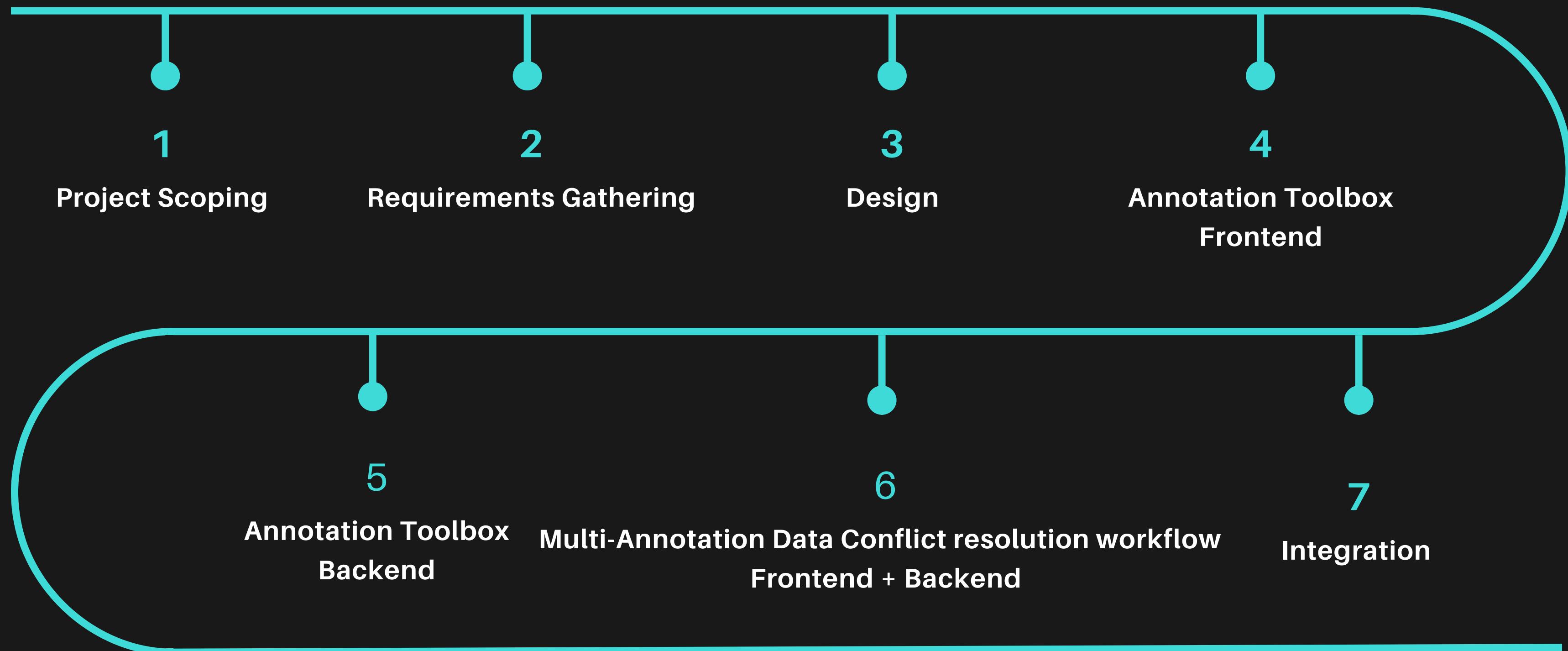
IMAGE ANNOTATION TOOLBOX

PLAN AND EXECUTION



TIMELINE

SCHEDULE AND PLAN



- **REQUIREMENTS DOCUMENT**
- **DESIGN DOCUMENT**
- **CODE**
- **DEMO**
- **DOCUMENTATION**

KEY ACHIEVEMENTS



ANNOTATION TOOLBOX

TASKS COMPLETED

- ENHANCED USER INTERFACE (UI/UX)
- FIXED "FILL INSIDE" OPTION
- INTRODUCED OVAL AND CIRCULAR BOUNDING BOXES
- IMPLEMENTED UNDO & REDO FEATURES
- ADDED DELETE BUTTON
- INTRODUCED RESET BUTTON
- CREATED LEFT AND RIGHT COLLAPSIBLE PANELS
- GRID LAYOUT OPTION
- INDEPENDENT ANNOTATIONS
- DISPLAYING ANNOTATIONS IN GRID
- SELECTABLE REGIONS
- TRANSITION FROM GRID VIEW TO ANNOTATION MODE
- LABELS AND COMMENTS FOR REGIONS

KEY ACHIEVEMENTS



ANNOTATION TOOLBOX

TASKS COMPLETED

- DYNAMIC DISPLAY OF LABELS AND COMMENTS
- DYNAMICALLY CHANGEABLE LABELS AND COMMENTS WHEN SELECTED FOR A REGION
- ANNOTATIONS SAVED TO BACKEND
- HIDE AND SHOW BUTTONS
- BACKEND FOR HIDE & SHOW FUNCTIONALITY
- COMMENTS FOR IMAGES
- REGION SELECTOR SIDEBARBOX
- MULTI ANNOTATOR ANNOTATION DATA COMPARISON
- CONFLICT RESOLUTION APPROVAL WORKFLOW
- BACKEND FOR APPROVAL WORKFLOW
- DOCSTRINGS FOR CODE QUALITY
- COLLABORATION WITH INTEGRATION TEAMS

DATA FOUNDATION SYSTEMS

IMPROVEMENTS

IMAGE ANNOTATION TOOLBOX



DepthFirstSearch

December 8 , 2023

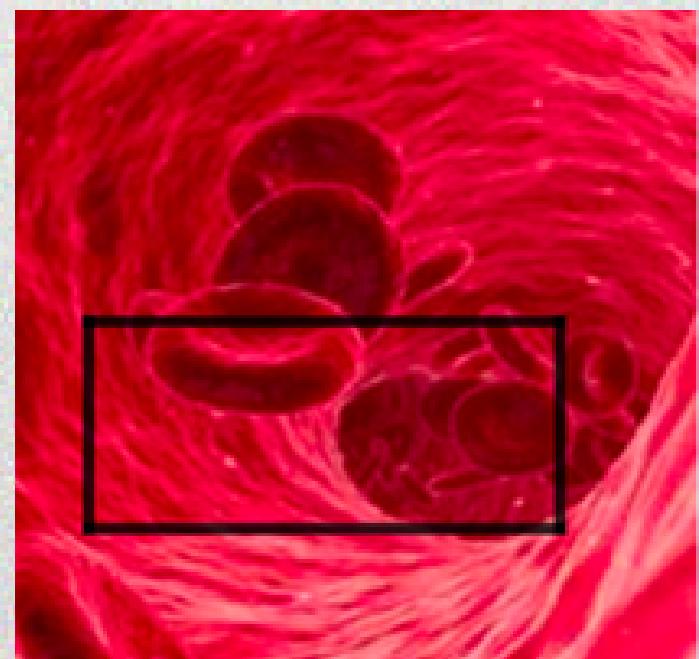
UI/UX IMPROVEMENTS

ID	NAME	DESCRIPTION	ACTIONS	CREATED AT
40329ba4-dad1-4be7-b61c-8052bae3869	meet	meet	View Download Add Info	2023-08-10T17:21:12.000Z
b7dc18bc-cf55-4e24-aed3-5c21a2a1b41	dfs_meet	dfs_meet	View Download Add Info	2023-08-21T16:41:31.000Z
f947ba54-09a0-4220-8529-9c52877fb9e3	amry_db	test database	View Download Add Info	2023-08-07T11:19:32.000Z



NAME	DESCRIPTION	ACTIONS	CREATED AT
meet	meet	View Download Add Info	August 10th, 2023 10:51:12 PM
abcd	elgh	View Download Add Info	October 24th, 2023 03:23:56 PM
dfs_meet	dfs_meet	View Download Add Info	August 21st, 2023 10:11:31 PM
amry_db	test database	View Download Add Info	August 7th, 2023 04:49:32 PM

FILL INSIDE BUG FIXED



Labels

- dummy
- pink

Add Label subr

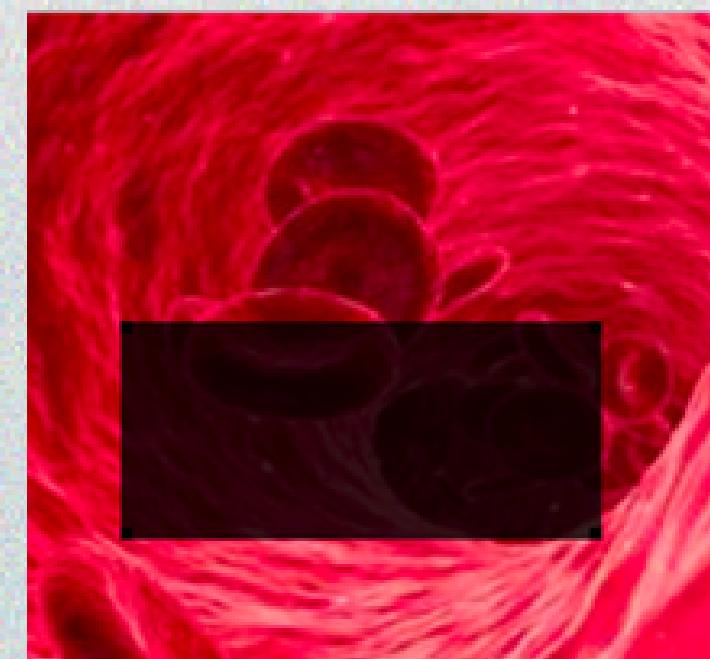
History

Fill Inside: No

Point width: 2

Line width: 3

Opacity: 0.8



Labels

- dummy
- pink

Add Label subr

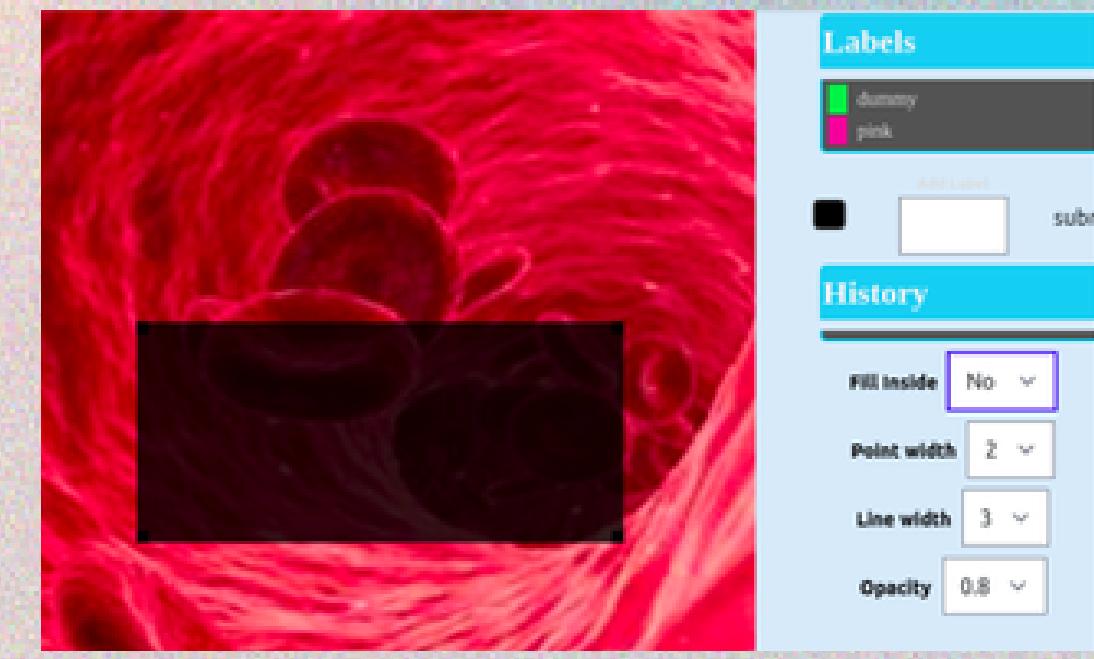
History

Fill Inside: Yes

Point width: 2

Line width: 3

Opacity: 0.8



Labels

- dummy
- pink

Add Label subr

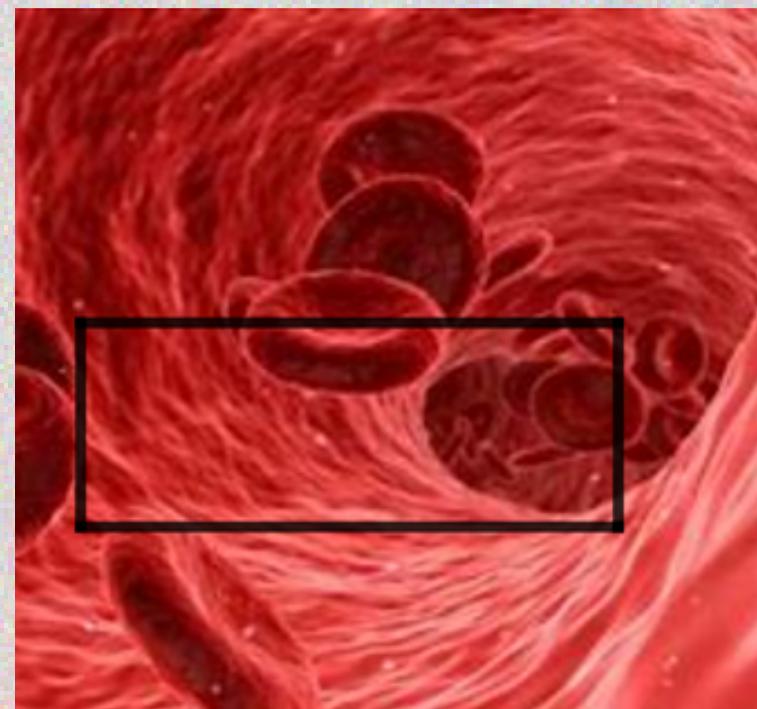
History

Fill Inside: No

Point width: 2

Line width: 3

Opacity: 0.8



Labels

- black
- blue
- dummy
- pink
- sky blue

Add Label Submit

History

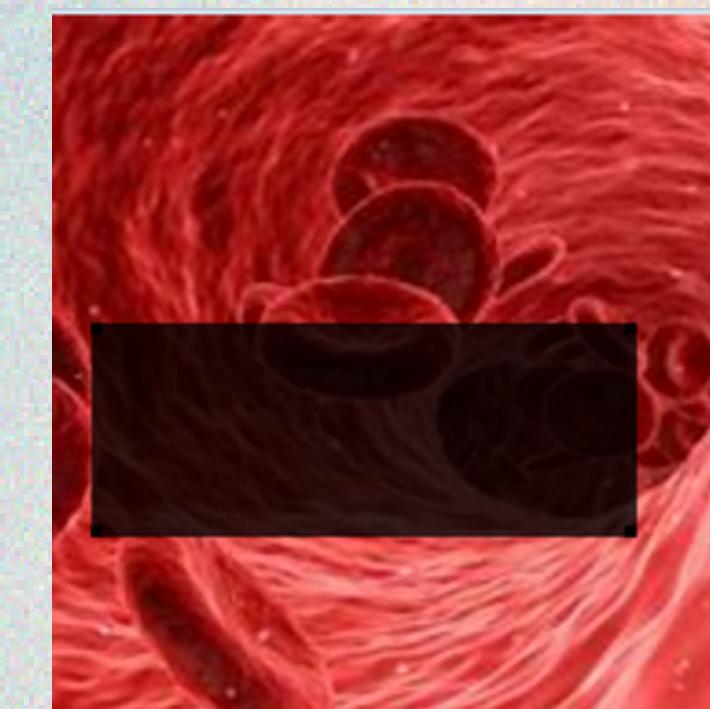
Opacity: 0.8

Fill Inside: No

Point width: 2

Line width: 3

Grid Size: 1



Labels

- black
- blue
- dummy
- pink
- sky blue

Add Label Submit

History

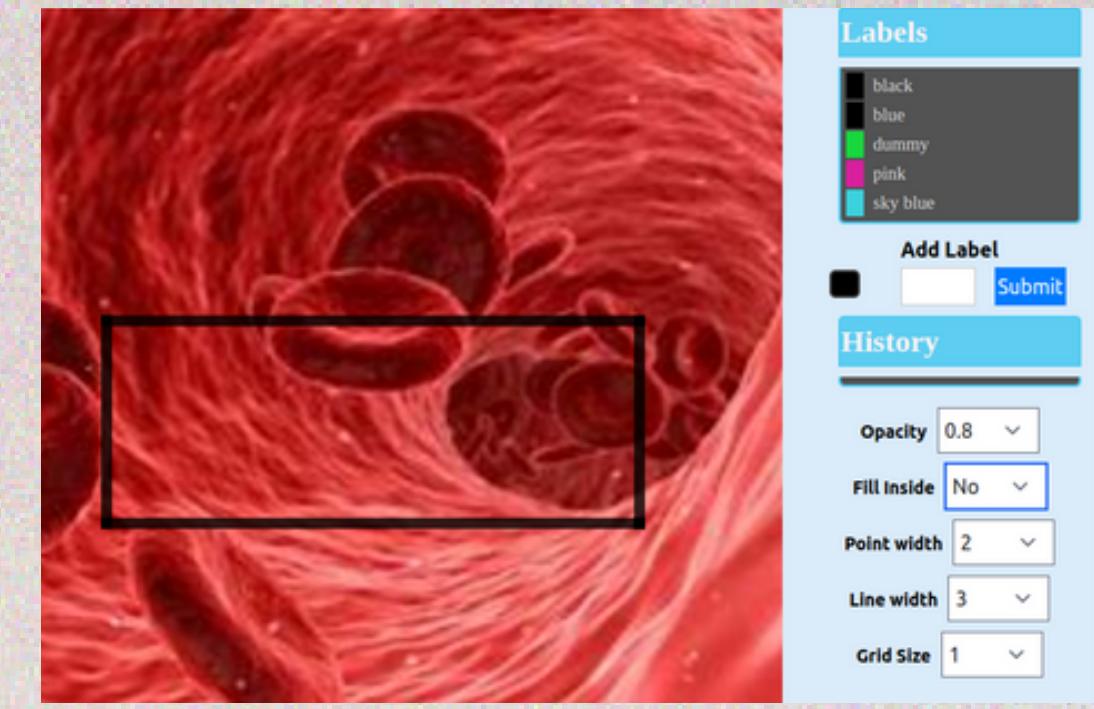
Opacity: 0.8

Fill Inside: Yes

Point width: 2

Line width: 3

Grid Size: 1



Labels

- black
- blue
- dummy
- pink
- sky blue

Add Label Submit

History

Opacity: 0.8

Fill Inside: No

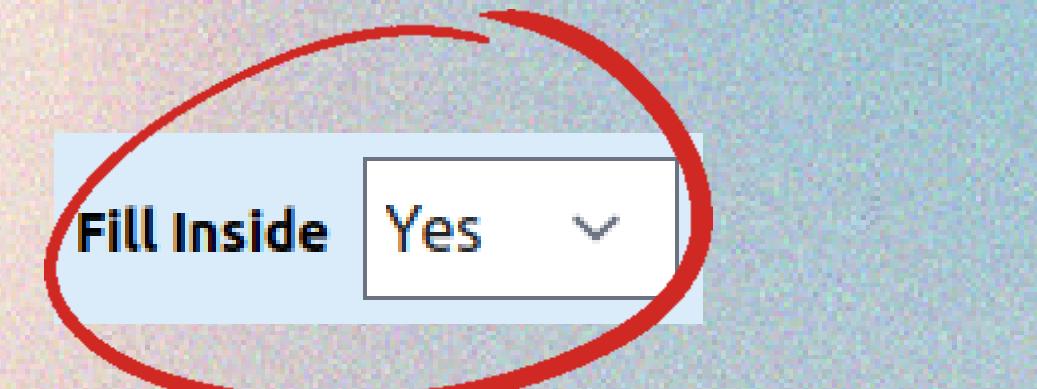
Point width: 2

Line width: 3

Grid Size: 1

Before

After



DATA FOUNDATION SYSTEMS

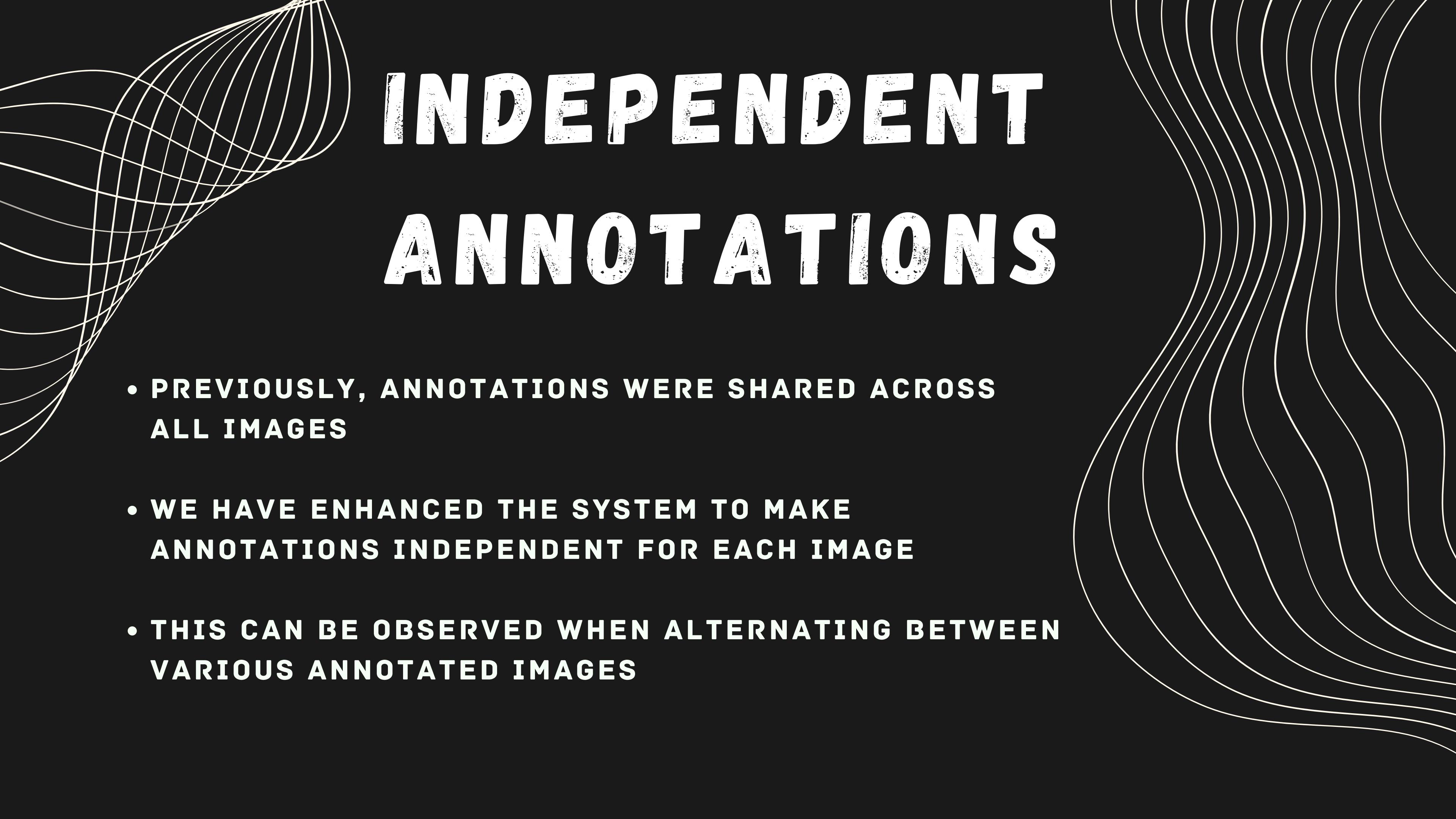
NEW FEATURES

IMAGE ANNOTATION TOOLBOX



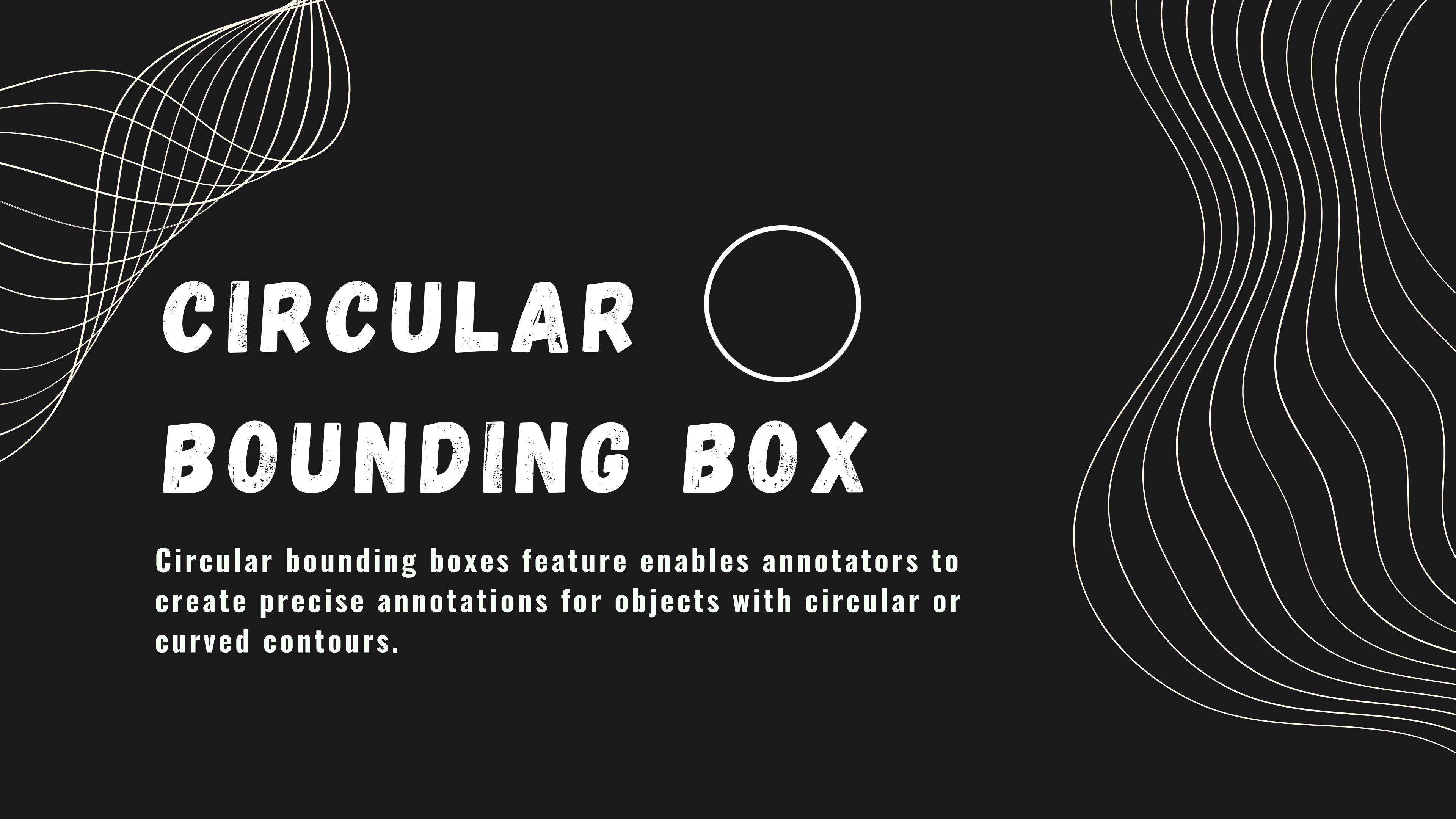
DepthFirstSearch

December 8 , 2023

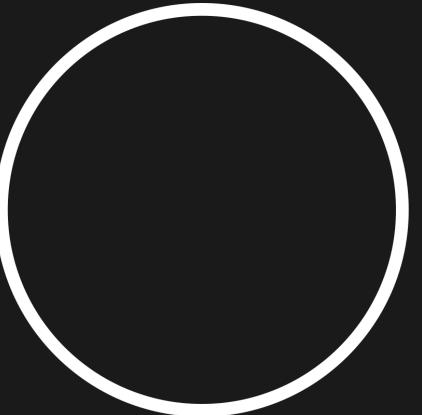


INDEPENDENT ANNOTATIONS

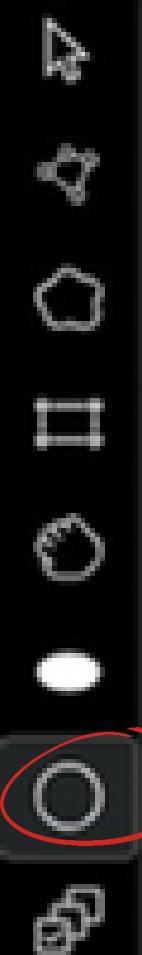
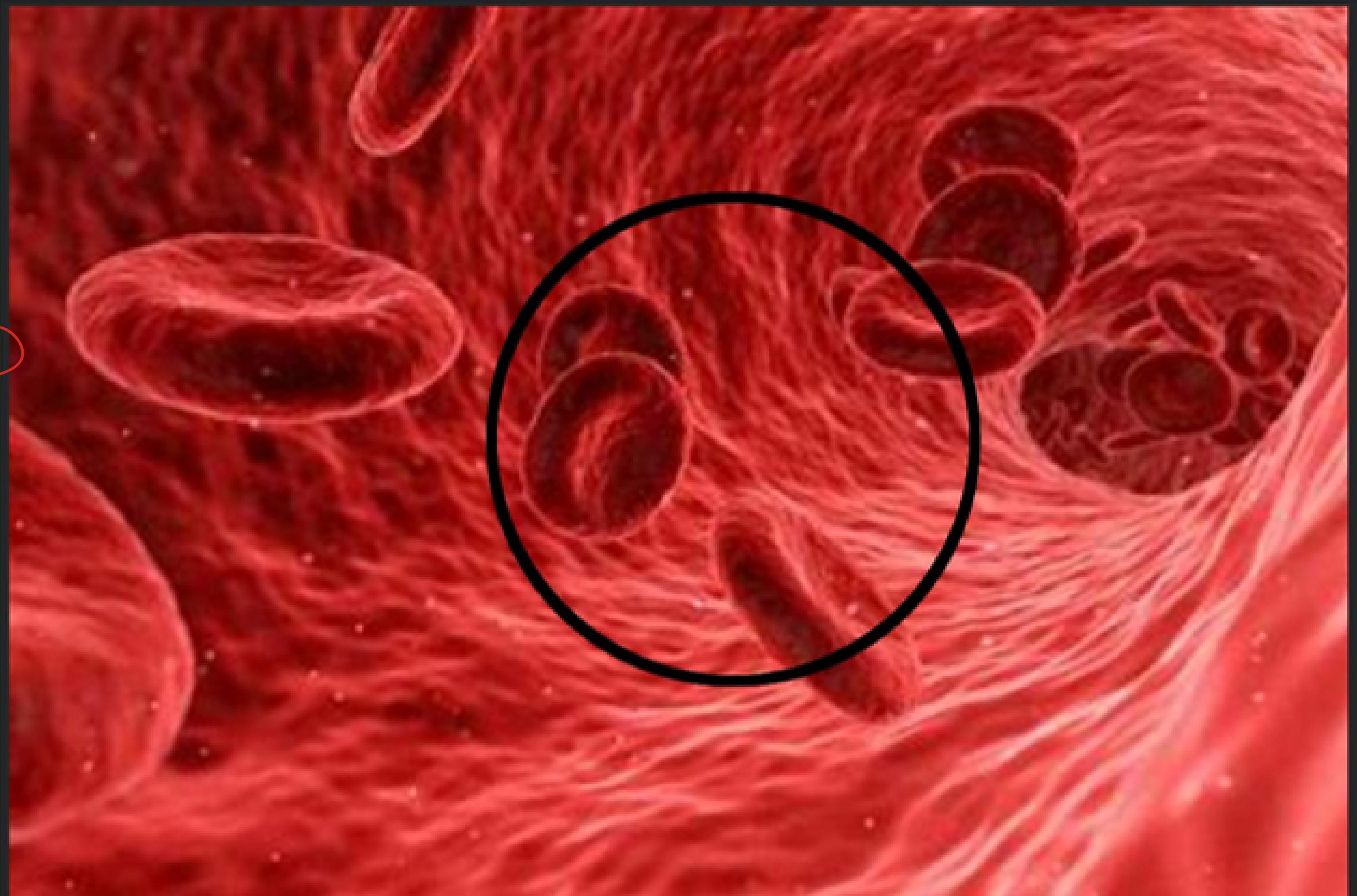
- PREVIOUSLY, ANNOTATIONS WERE SHARED ACROSS ALL IMAGES
- WE HAVE ENHANCED THE SYSTEM TO MAKE ANNOTATIONS INDEPENDENT FOR EACH IMAGE
- THIS CAN BE OBSERVED WHEN ALTERNATING BETWEEN VARIOUS ANNOTATED IMAGES



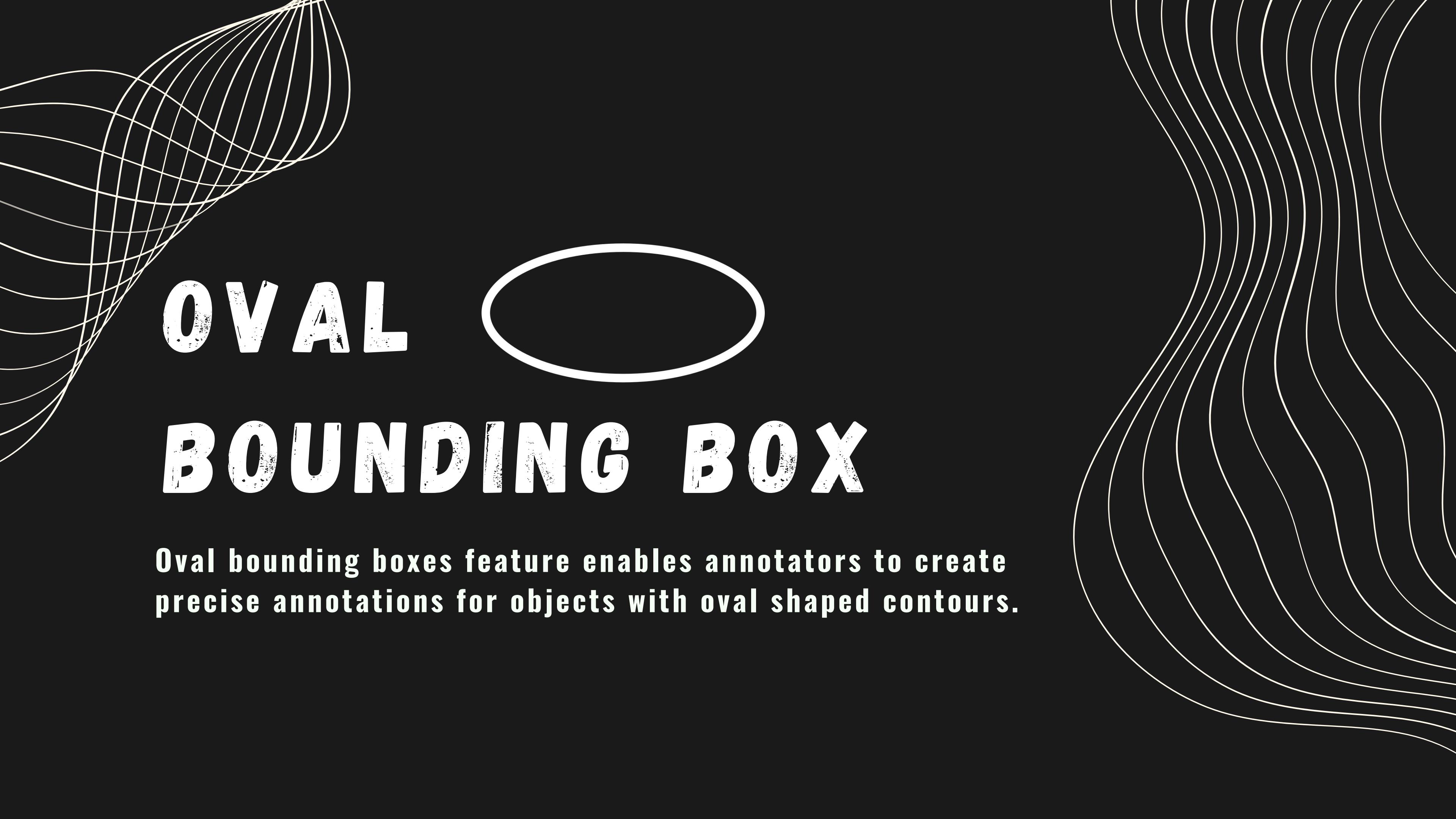
CIRCULAR BOUNDING BOX



Circular bounding boxes feature enables annotators to create precise annotations for objects with circular or curved contours.

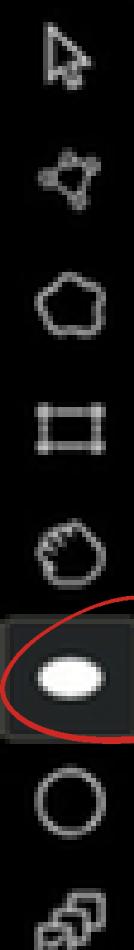


- Labels
- History
- Region Configuration
- Region Details
- Grid Layout
- Region Selector
- Image Comments



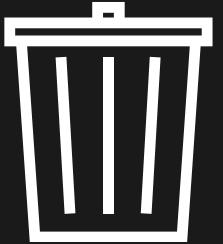
OVAL BOUNDING BOX

Oval bounding boxes feature enables annotators to create precise annotations for objects with oval shaped contours.

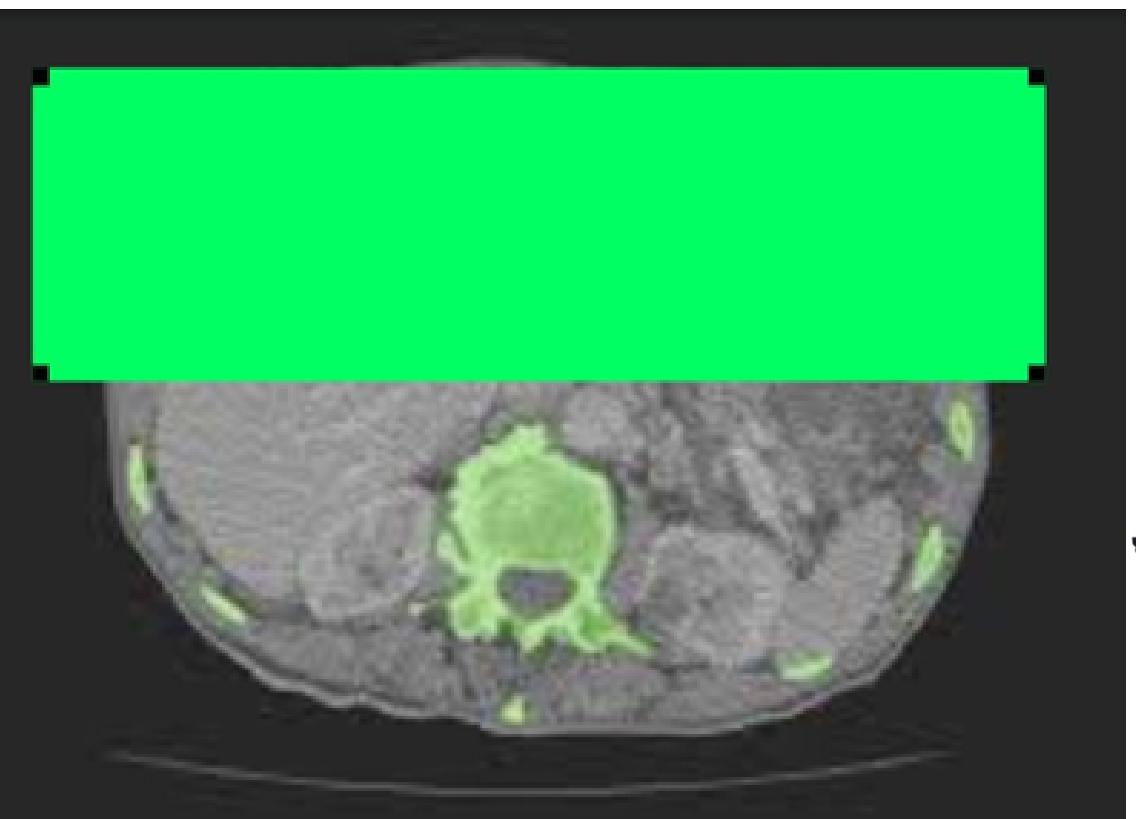
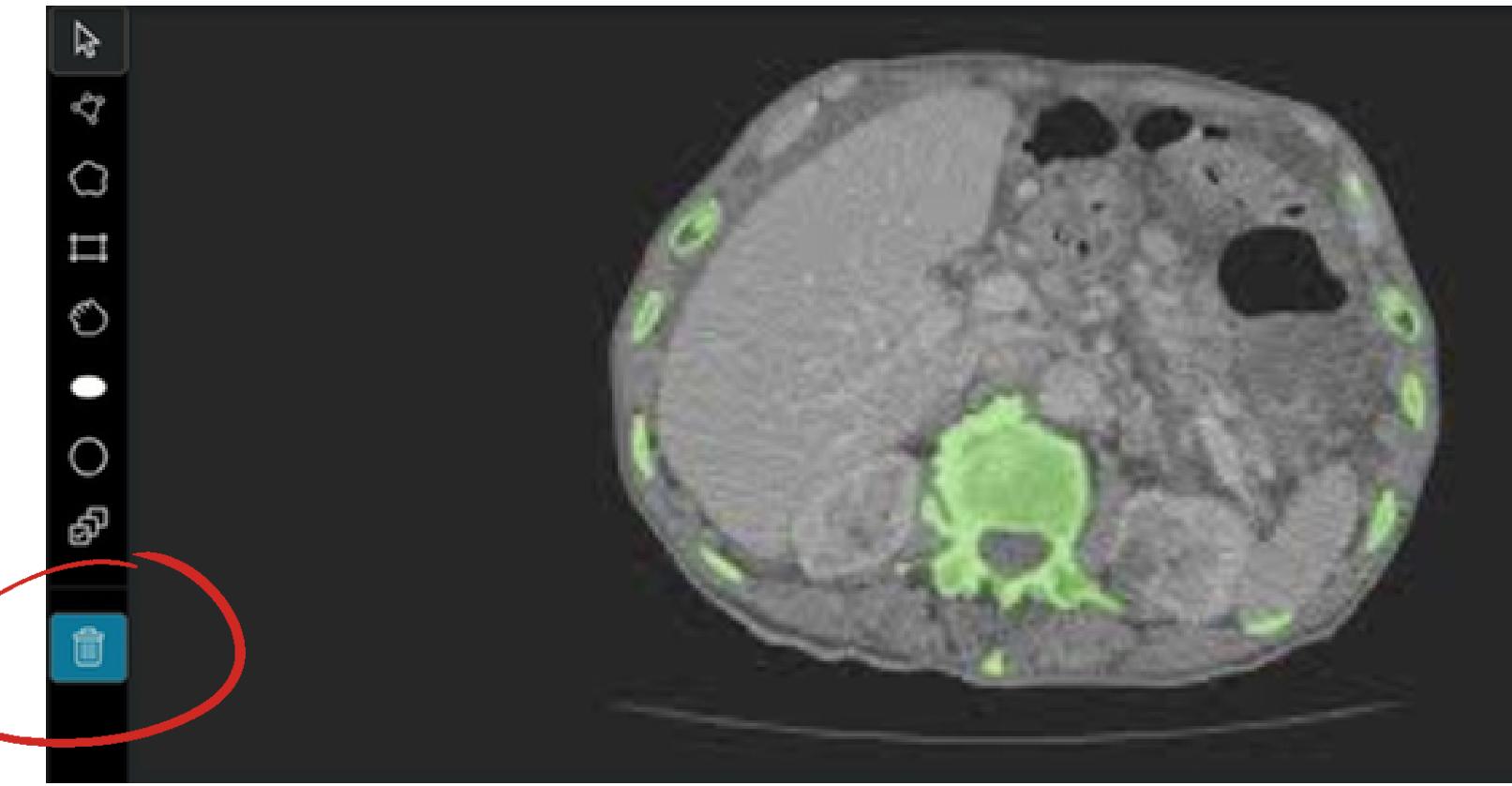
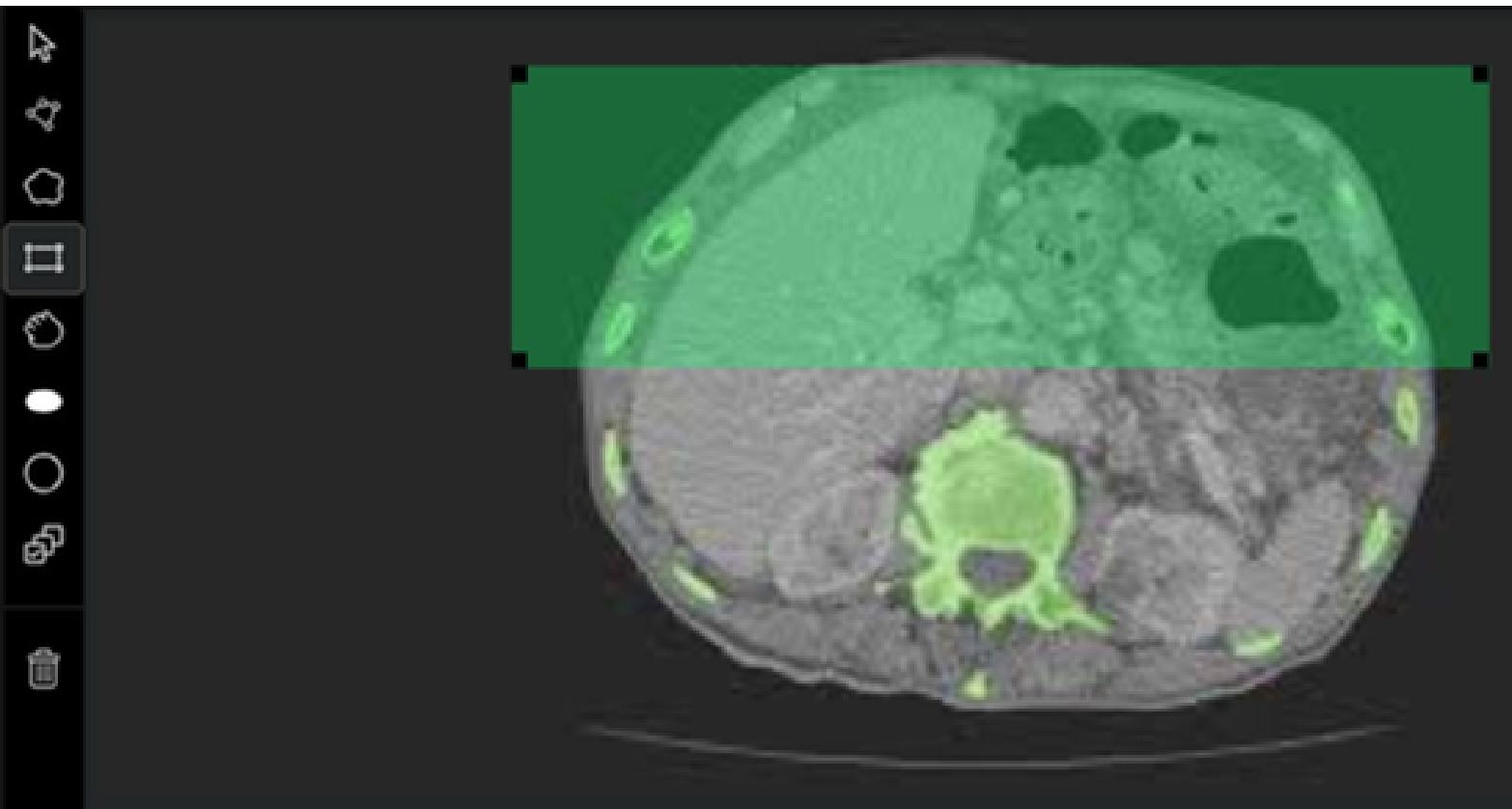


- Labels
- History
- Region Configuration
- Region Details
- Grid Layout
- Region Selector
- Image Comments

ANNOTATION SELECTION AND DELETION

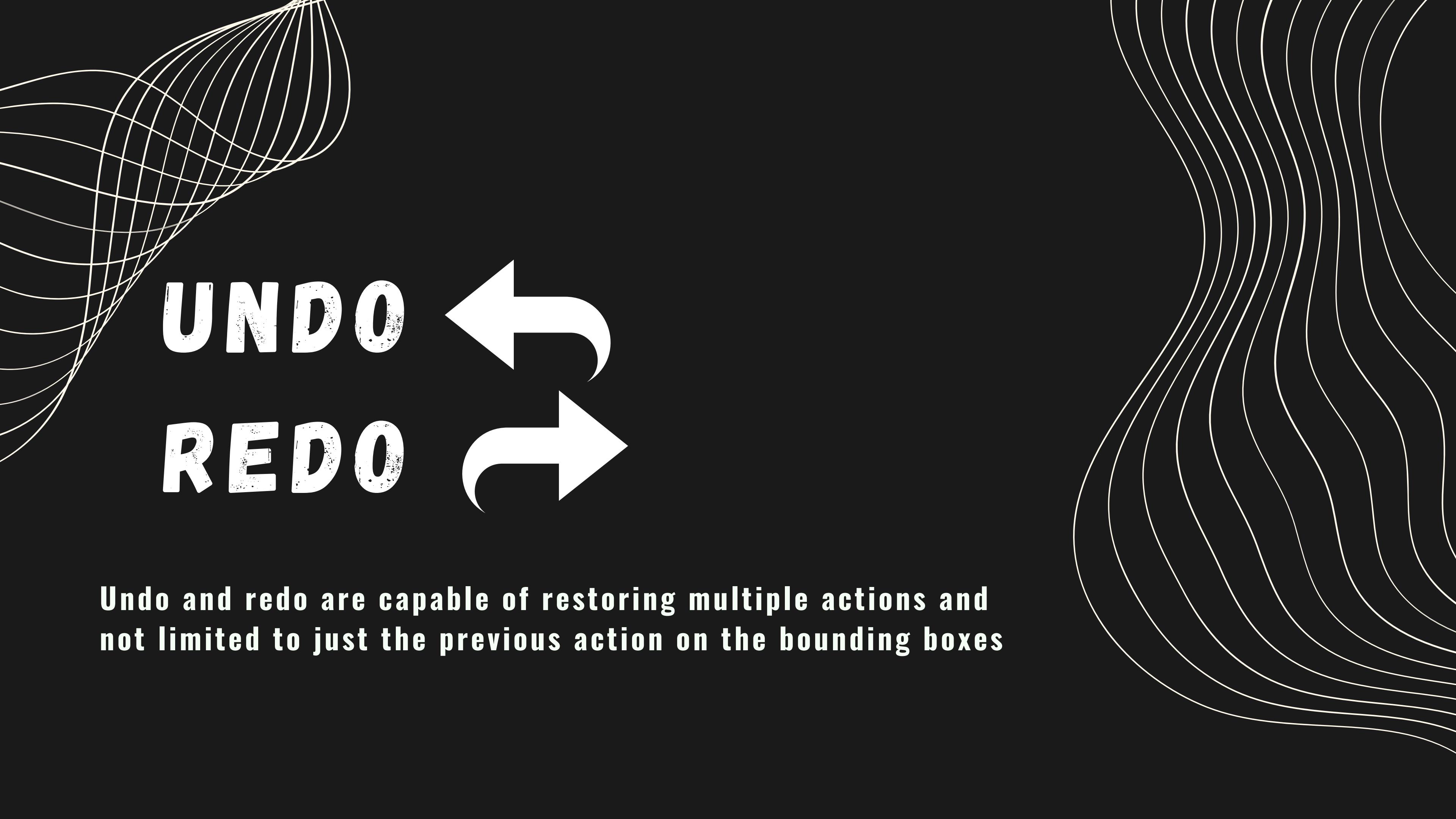


**To delete an annotation, we allow the user/moderator to
select the required annotation and delete them one at a time**

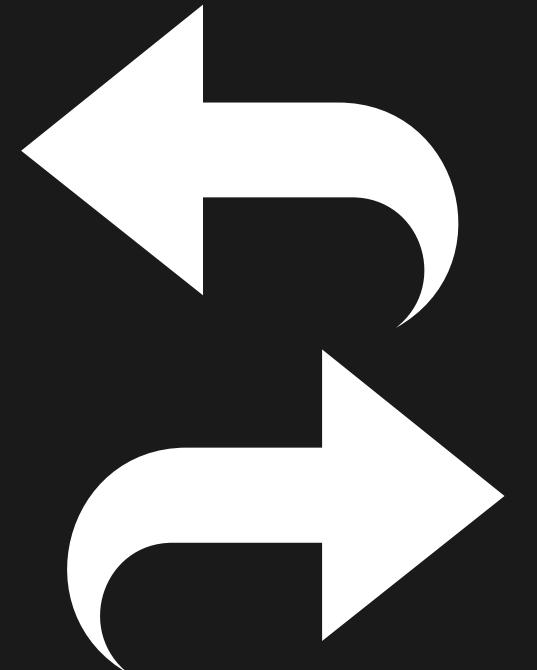


Select
Annotation

Delete
Annotation

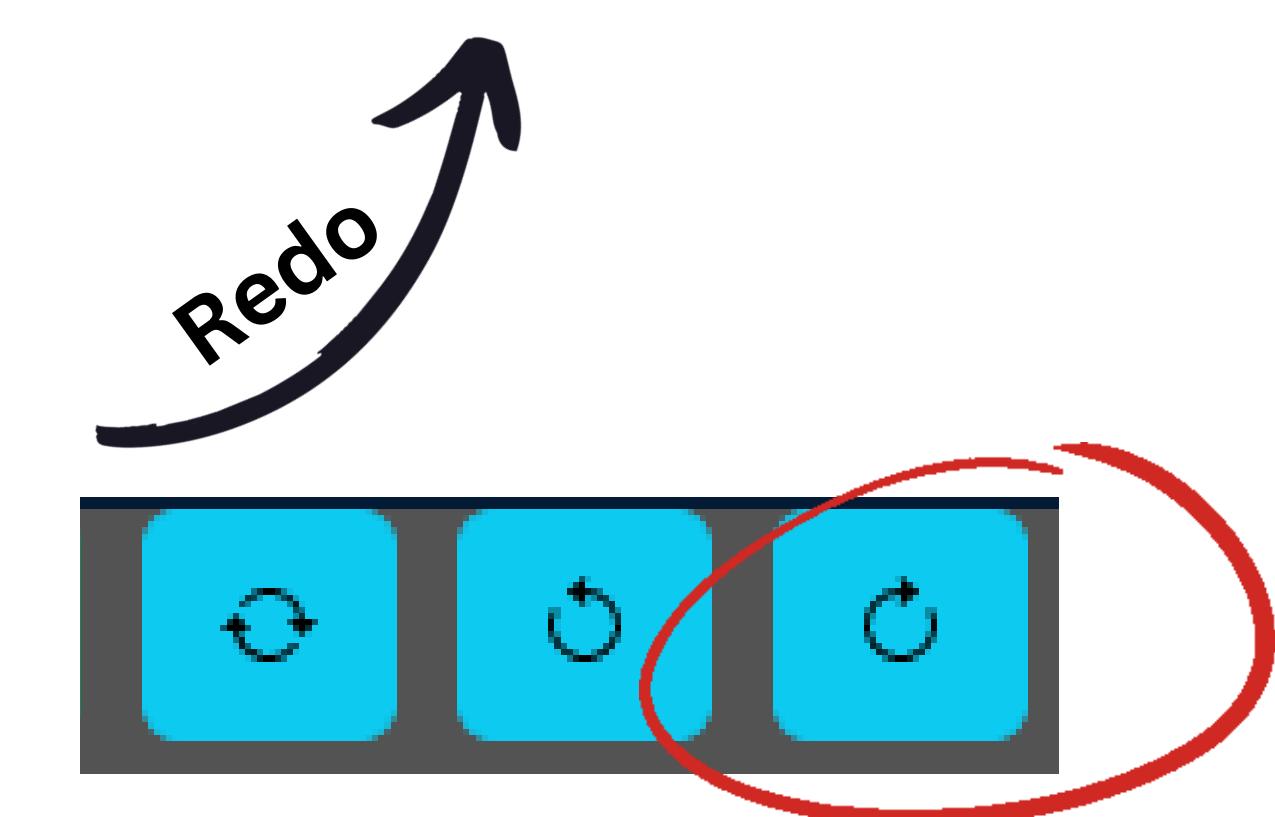
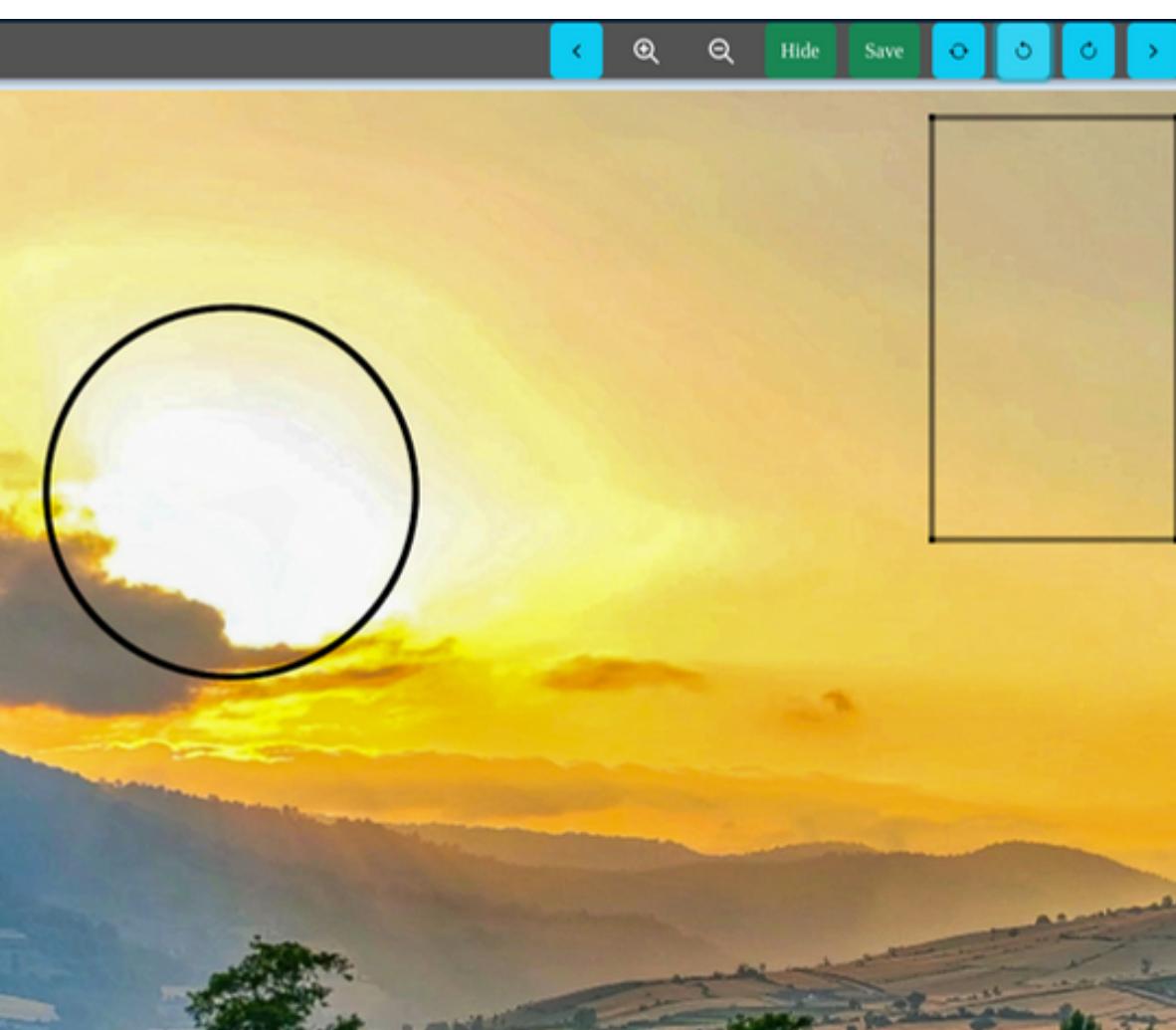
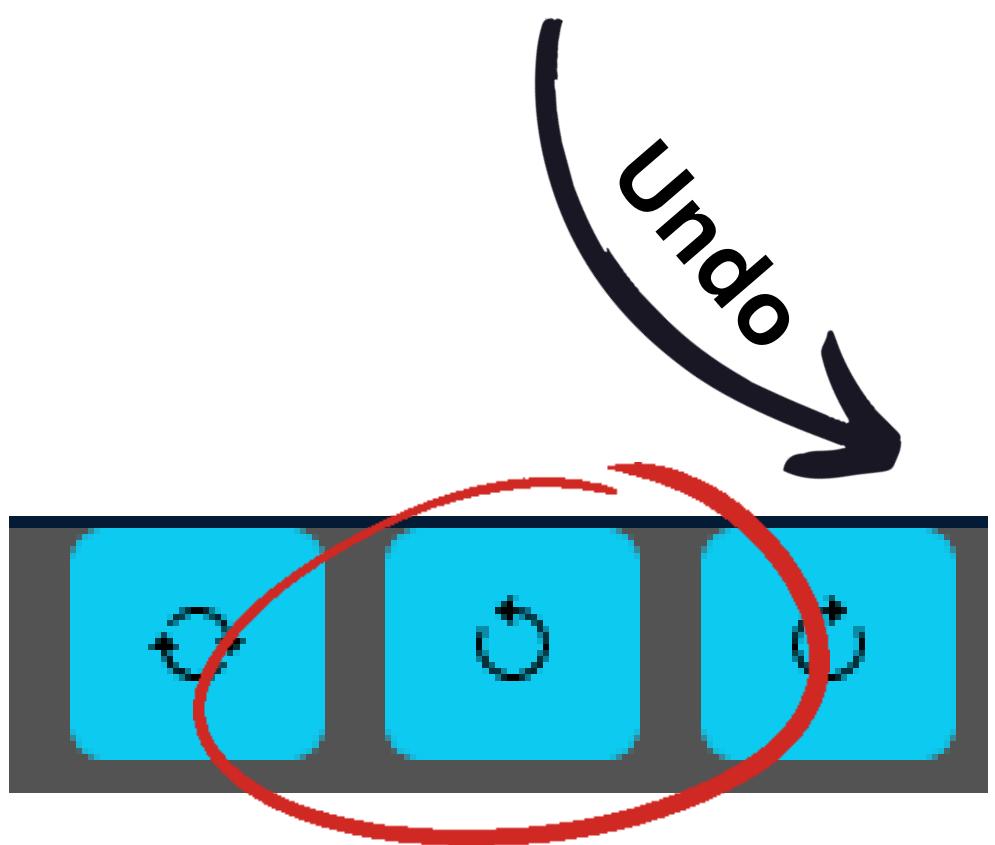
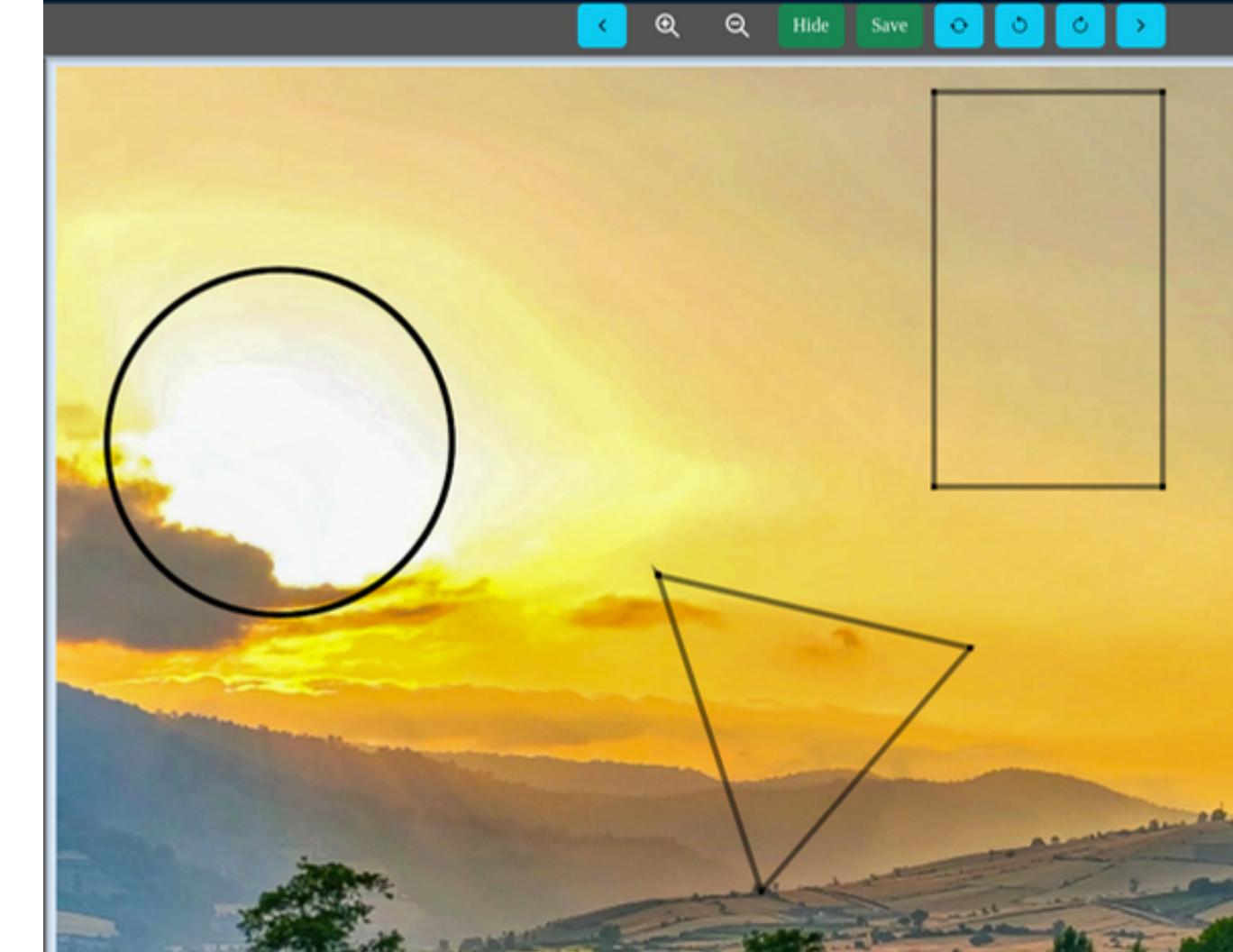
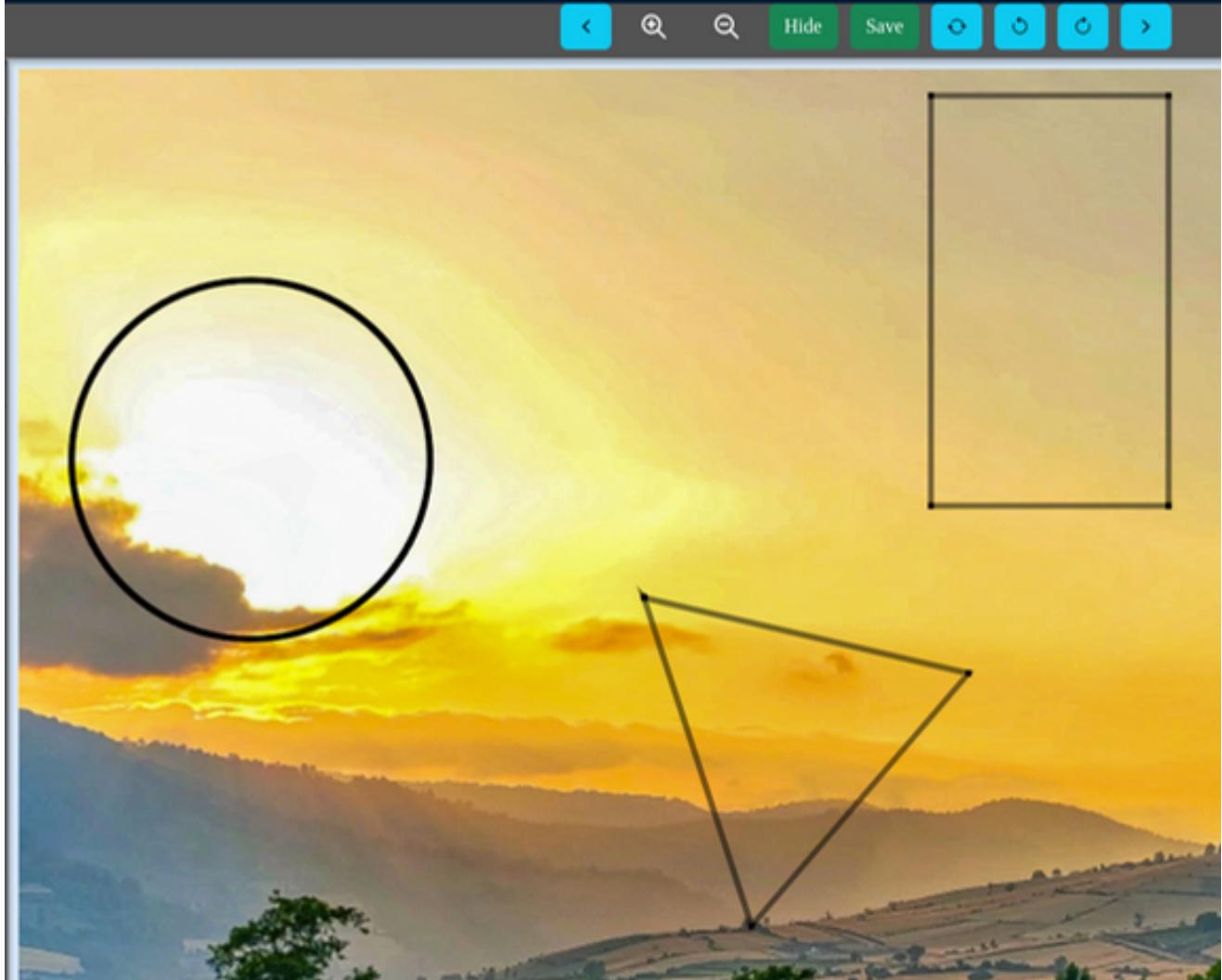


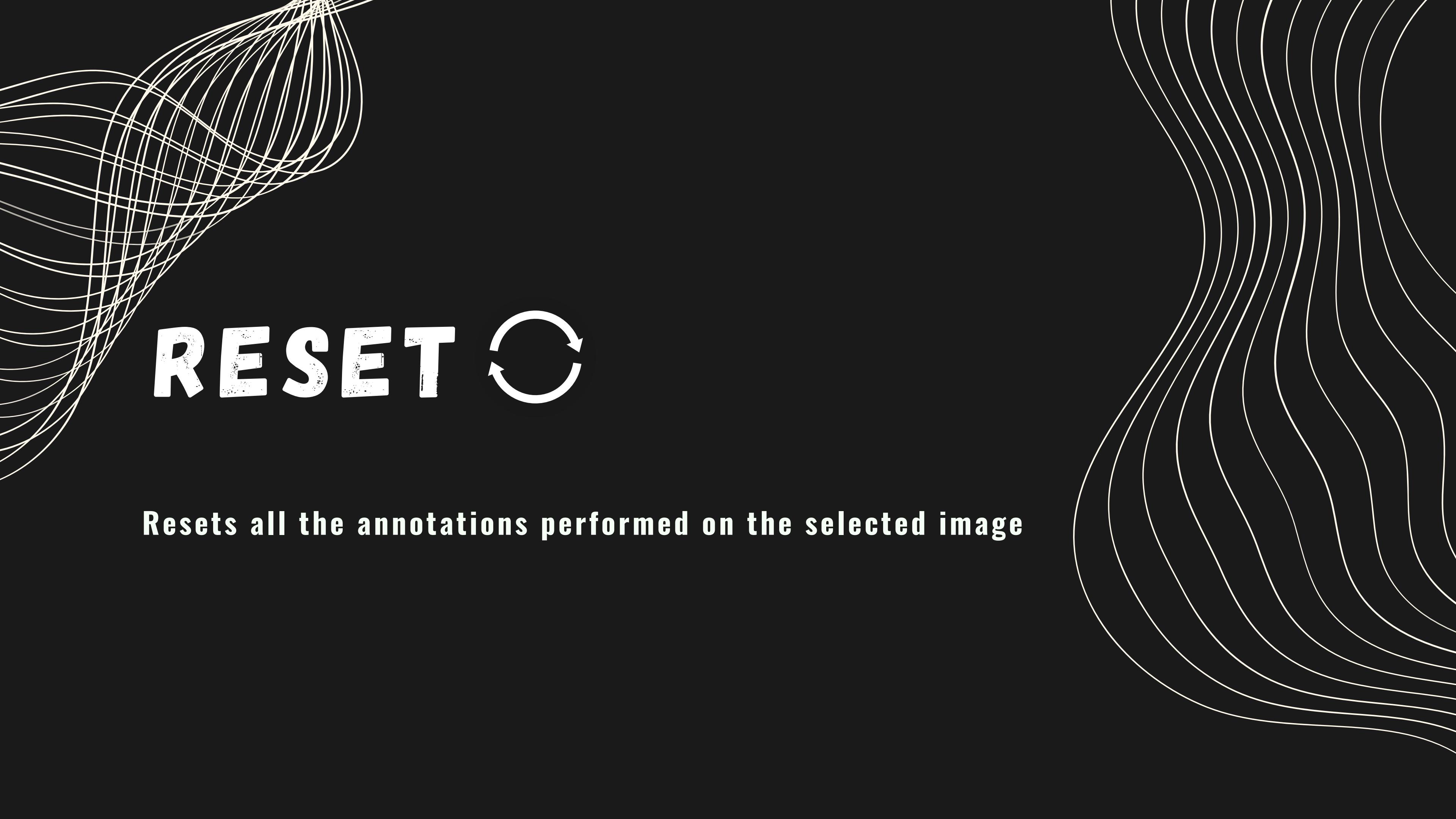
UNDO

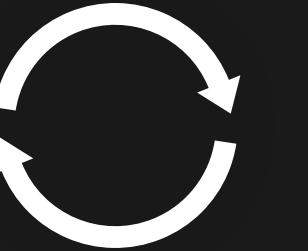


REDO

**Undo and redo are capable of restoring multiple actions and
not limited to just the previous action on the bounding boxes**

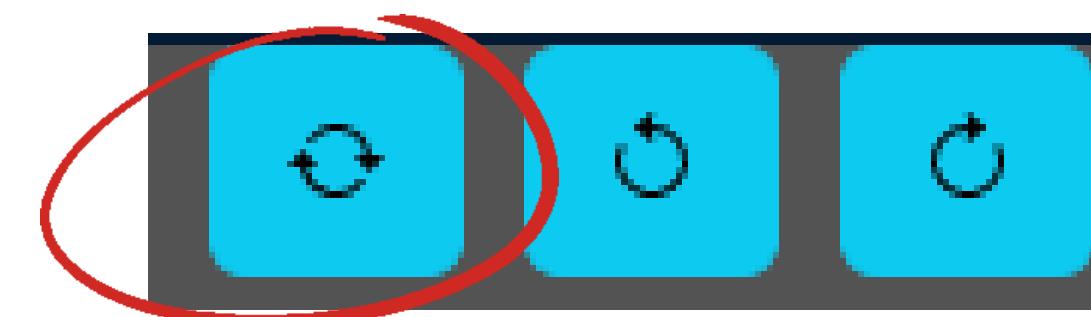
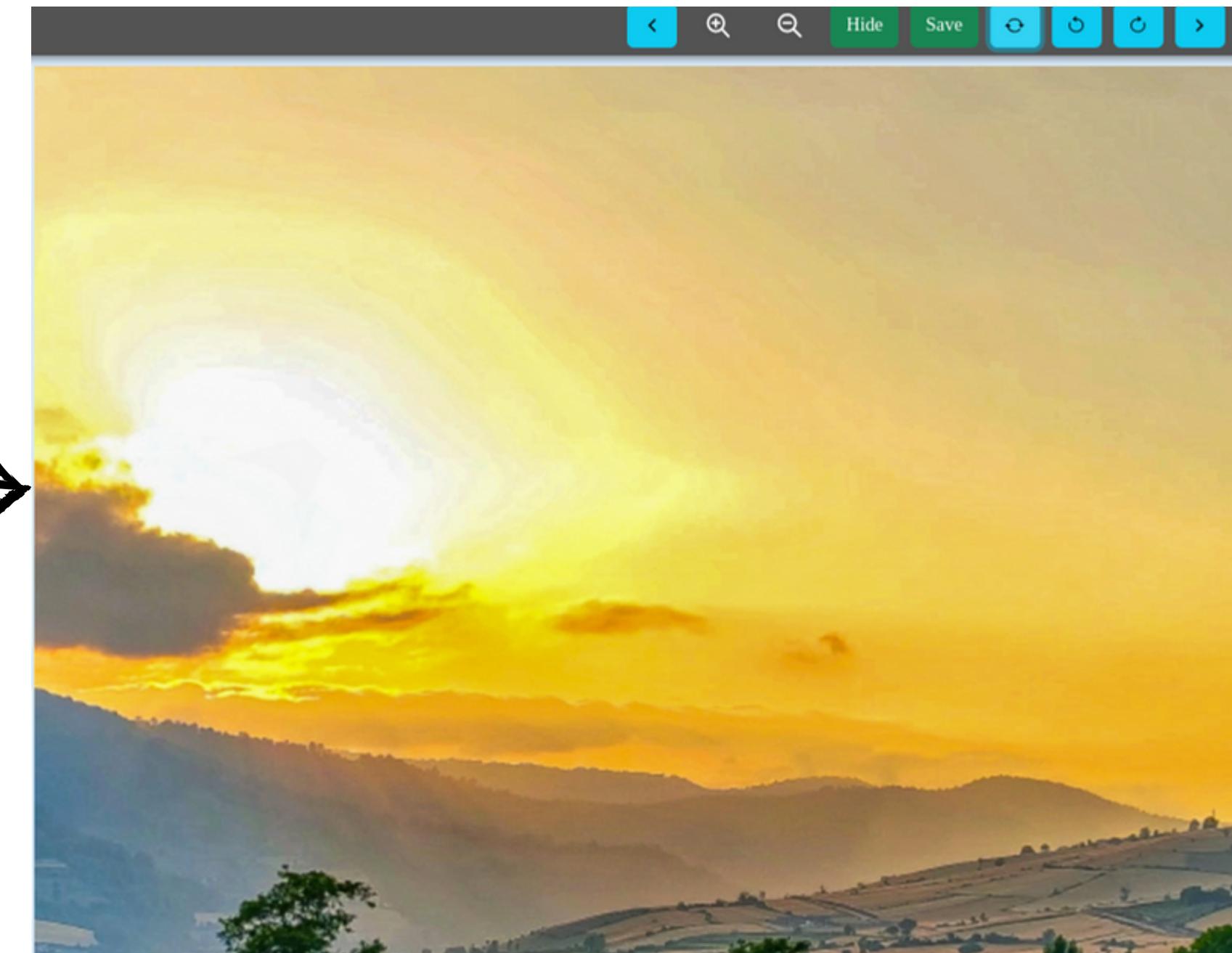
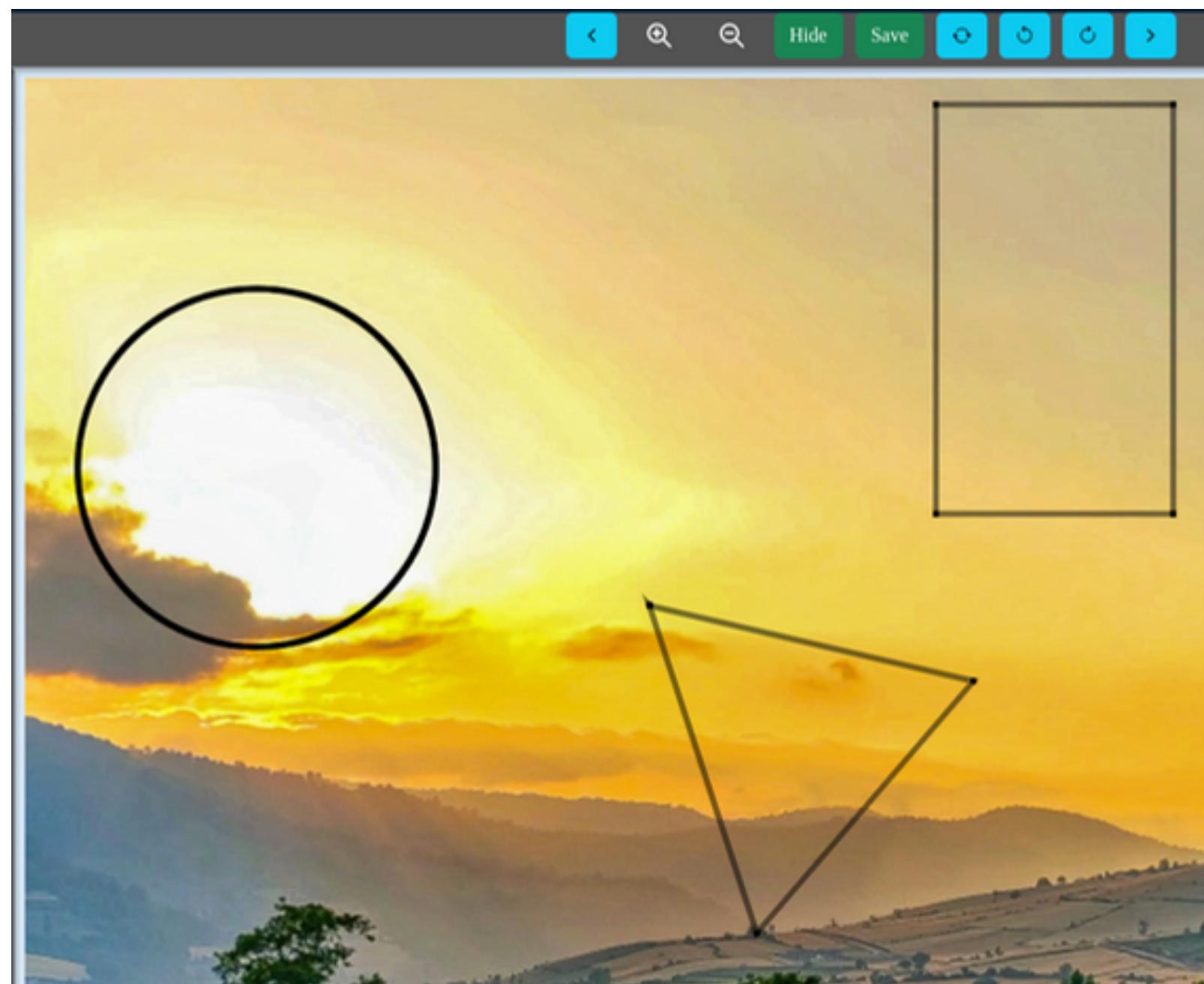




RESET 

Resets all the annotations performed on the selected image

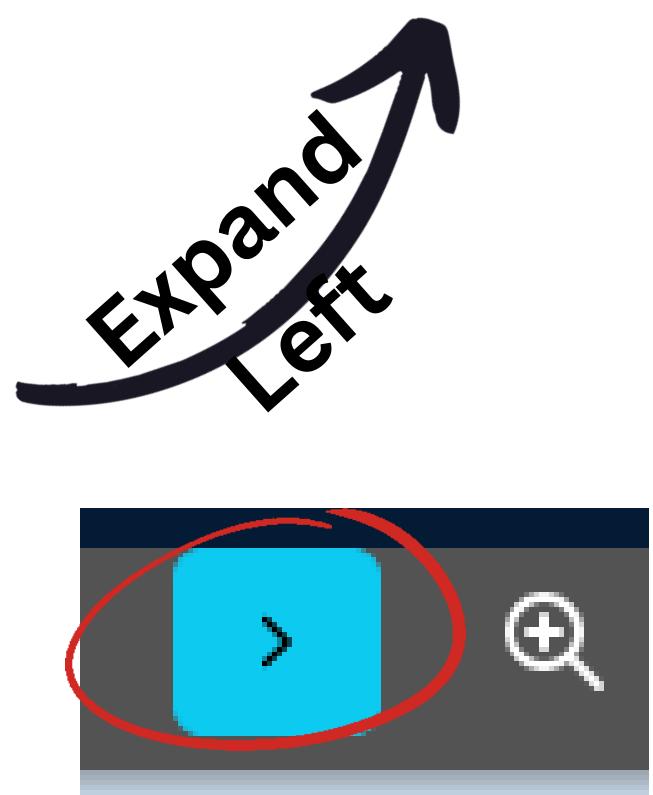
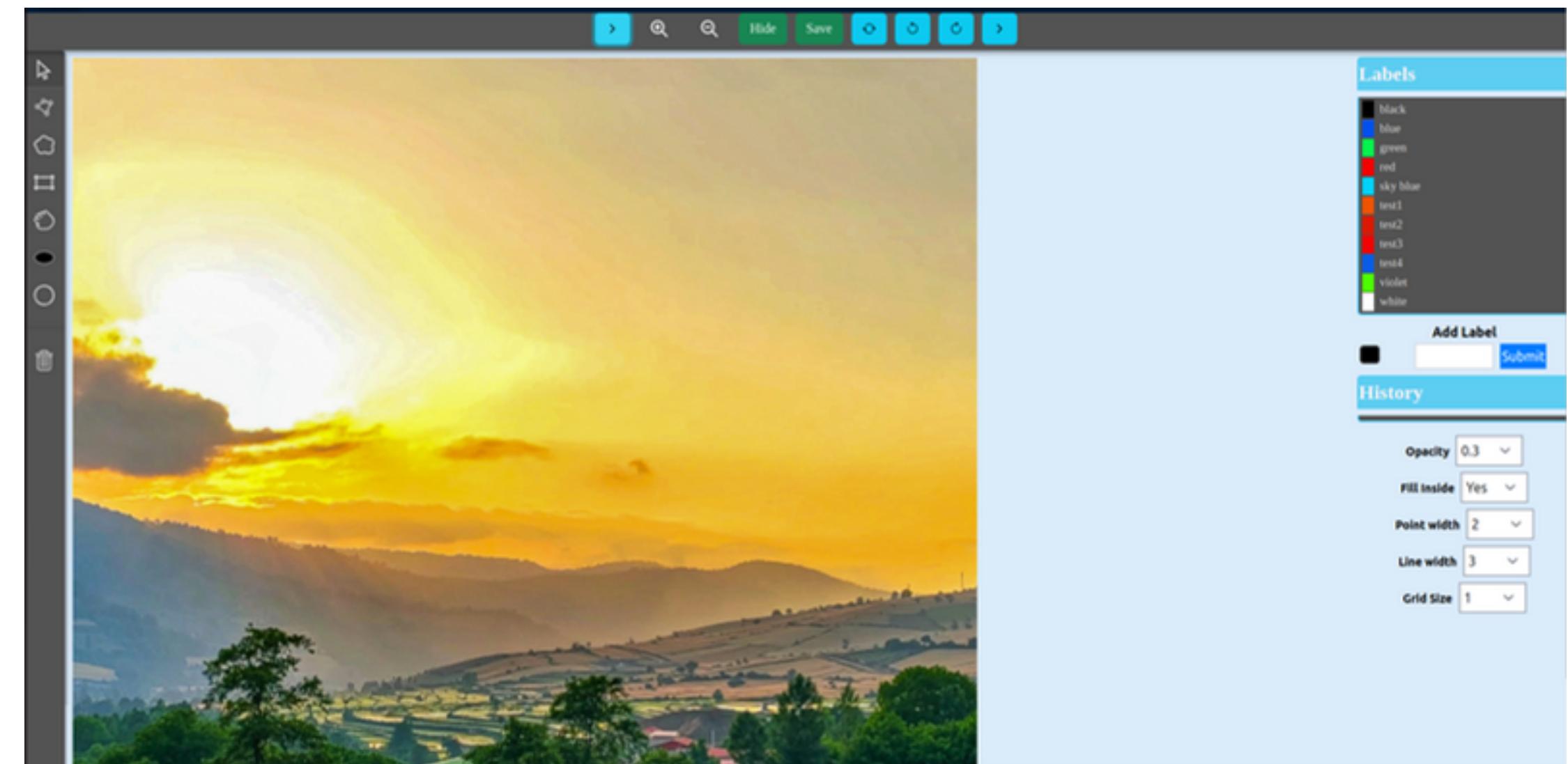
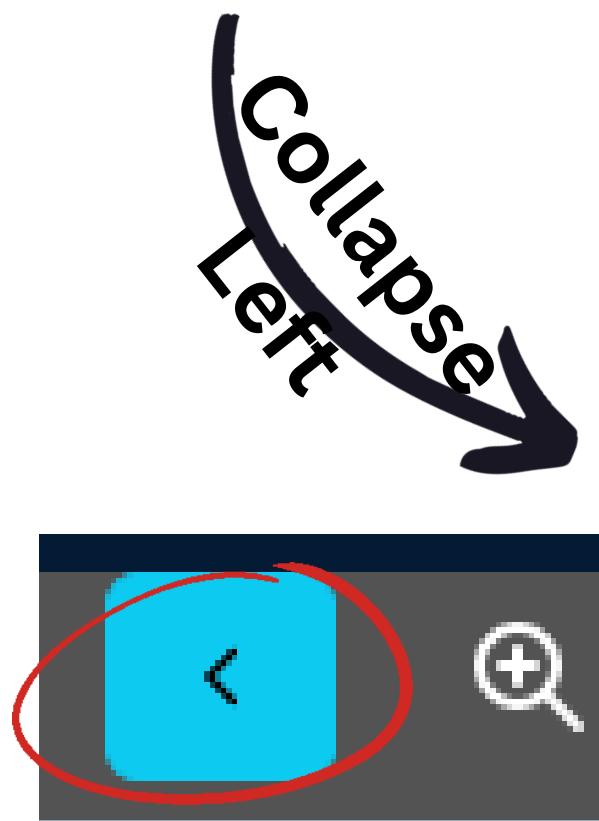
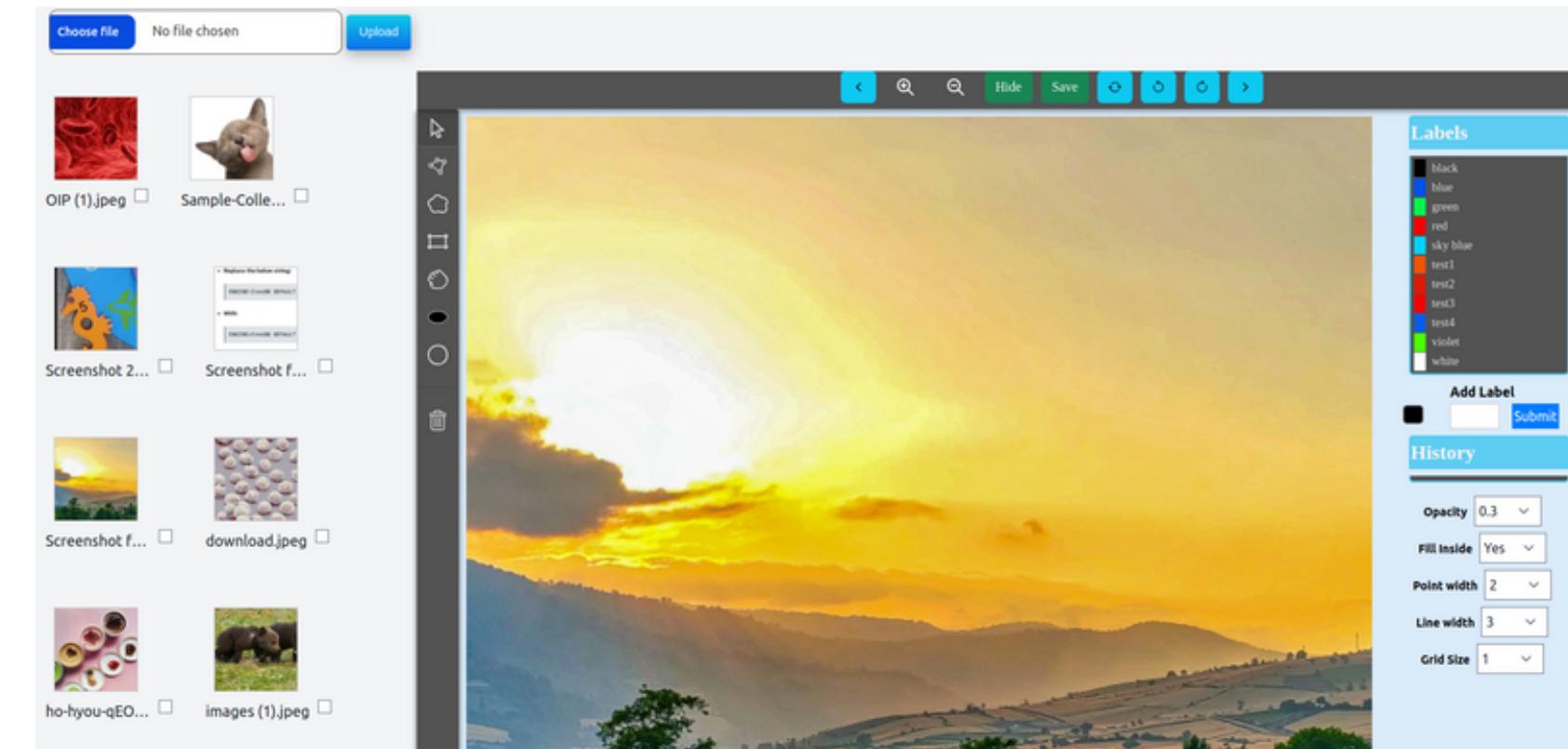
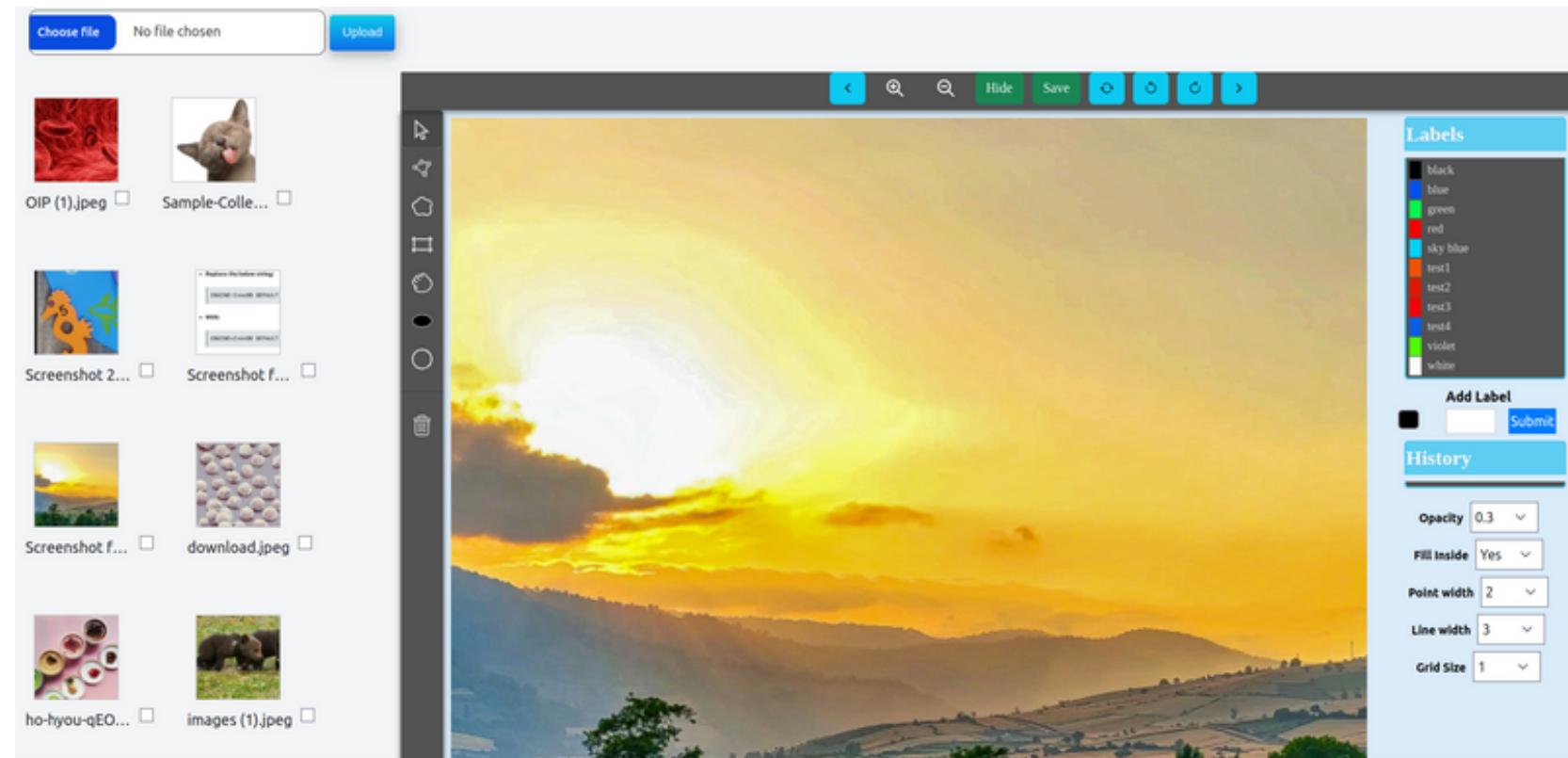
Reset

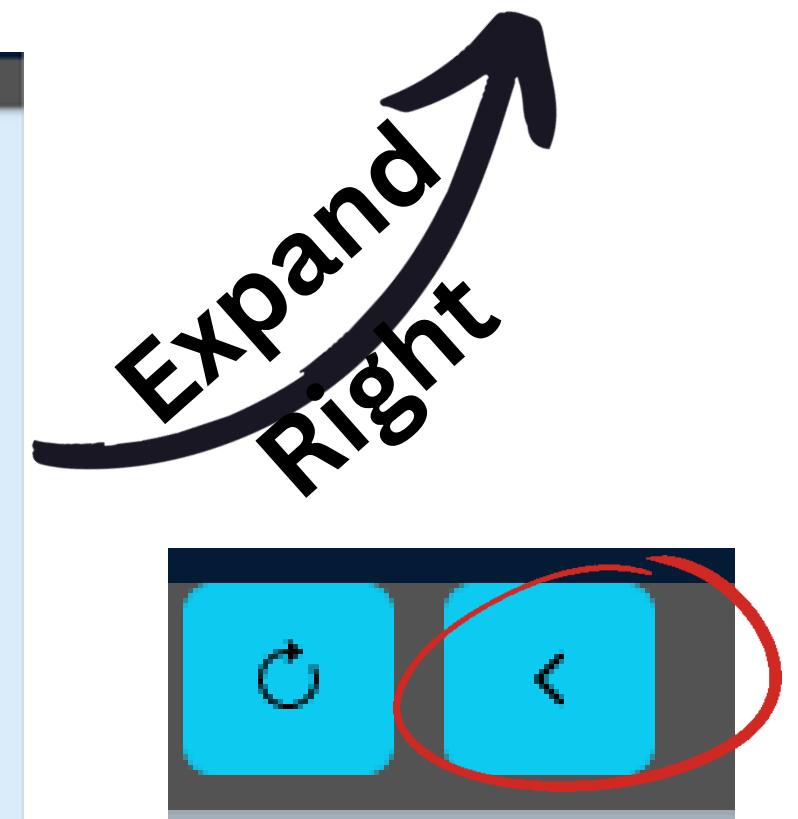
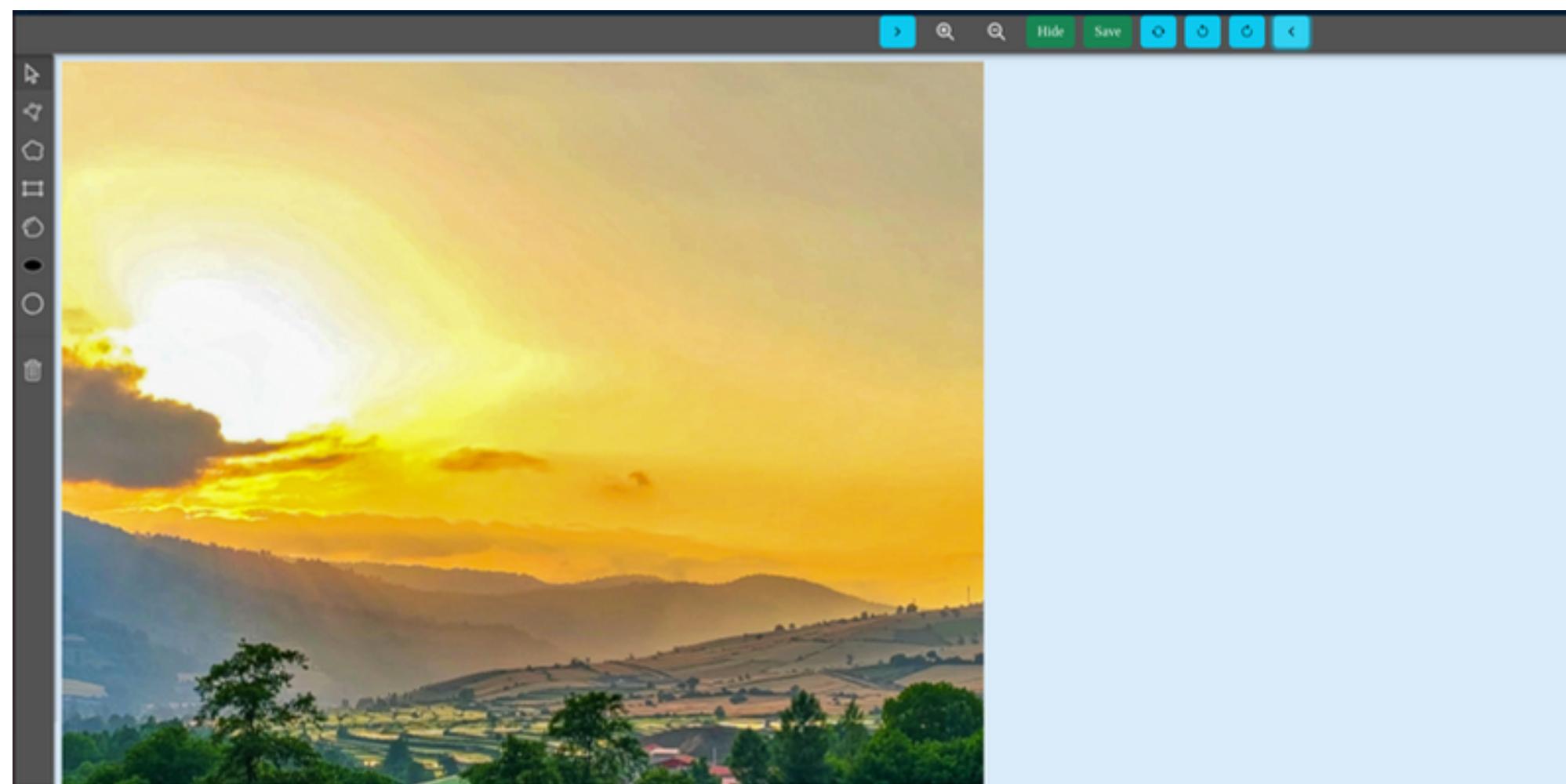
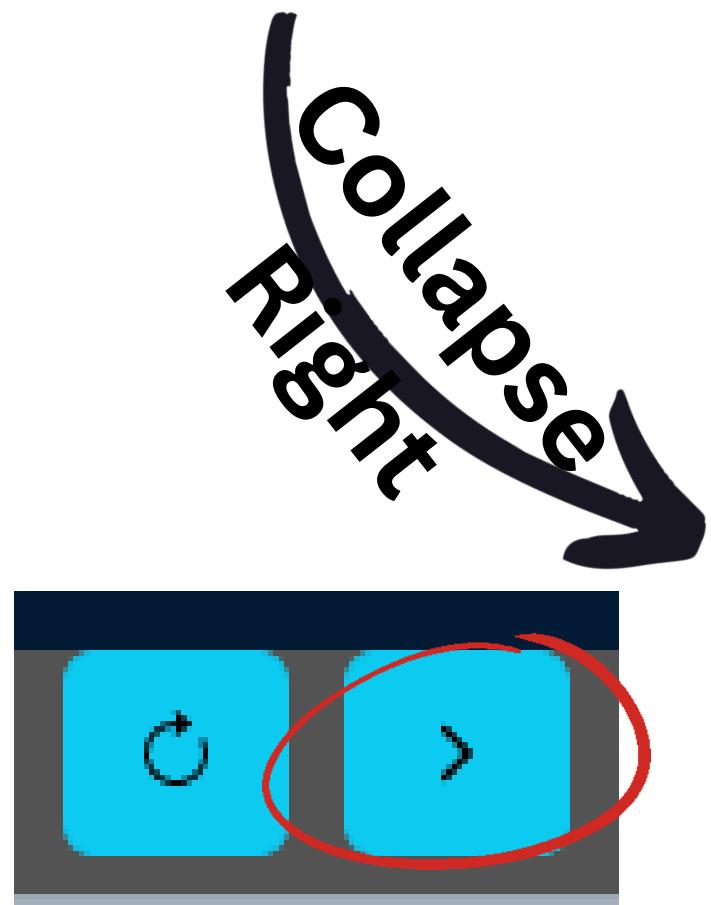
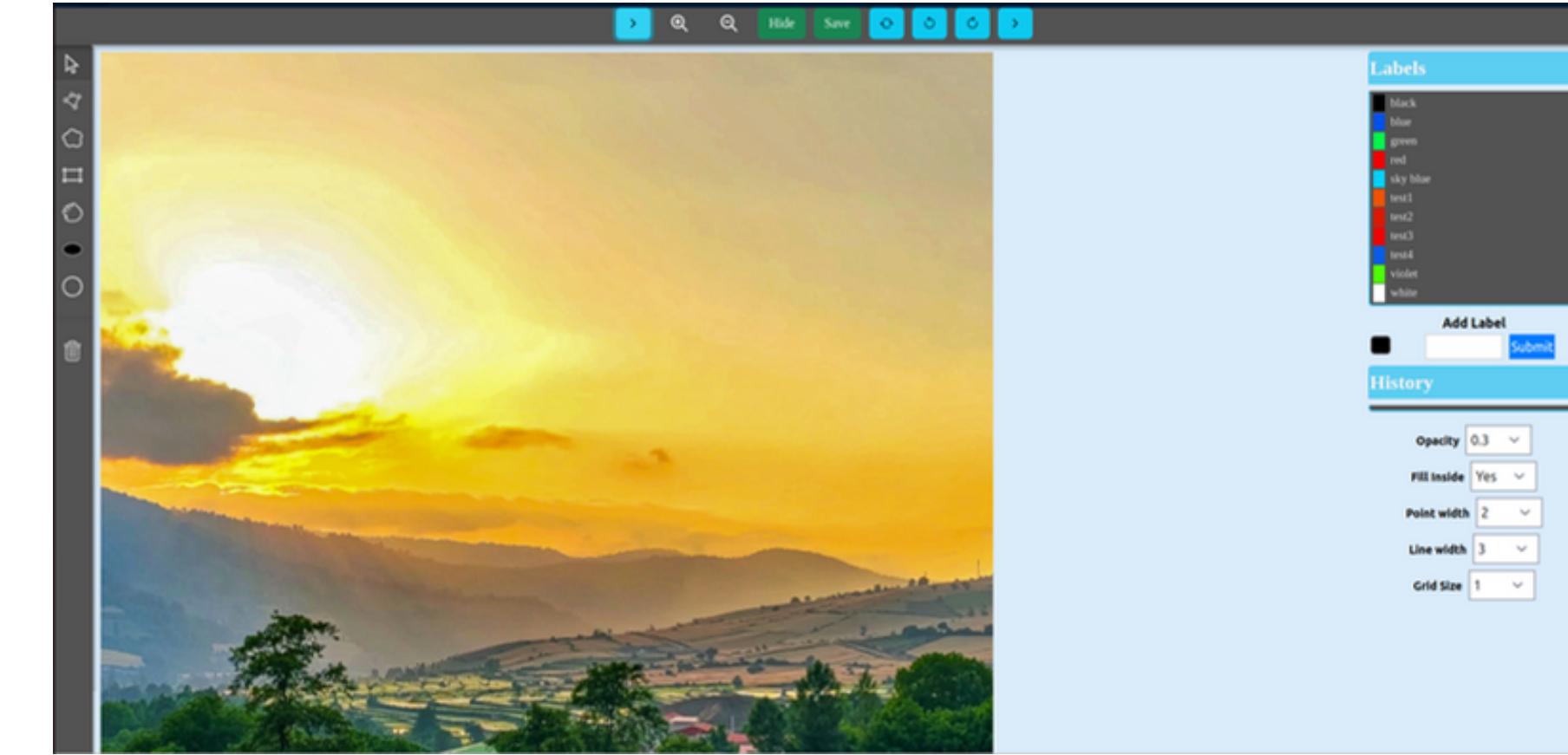
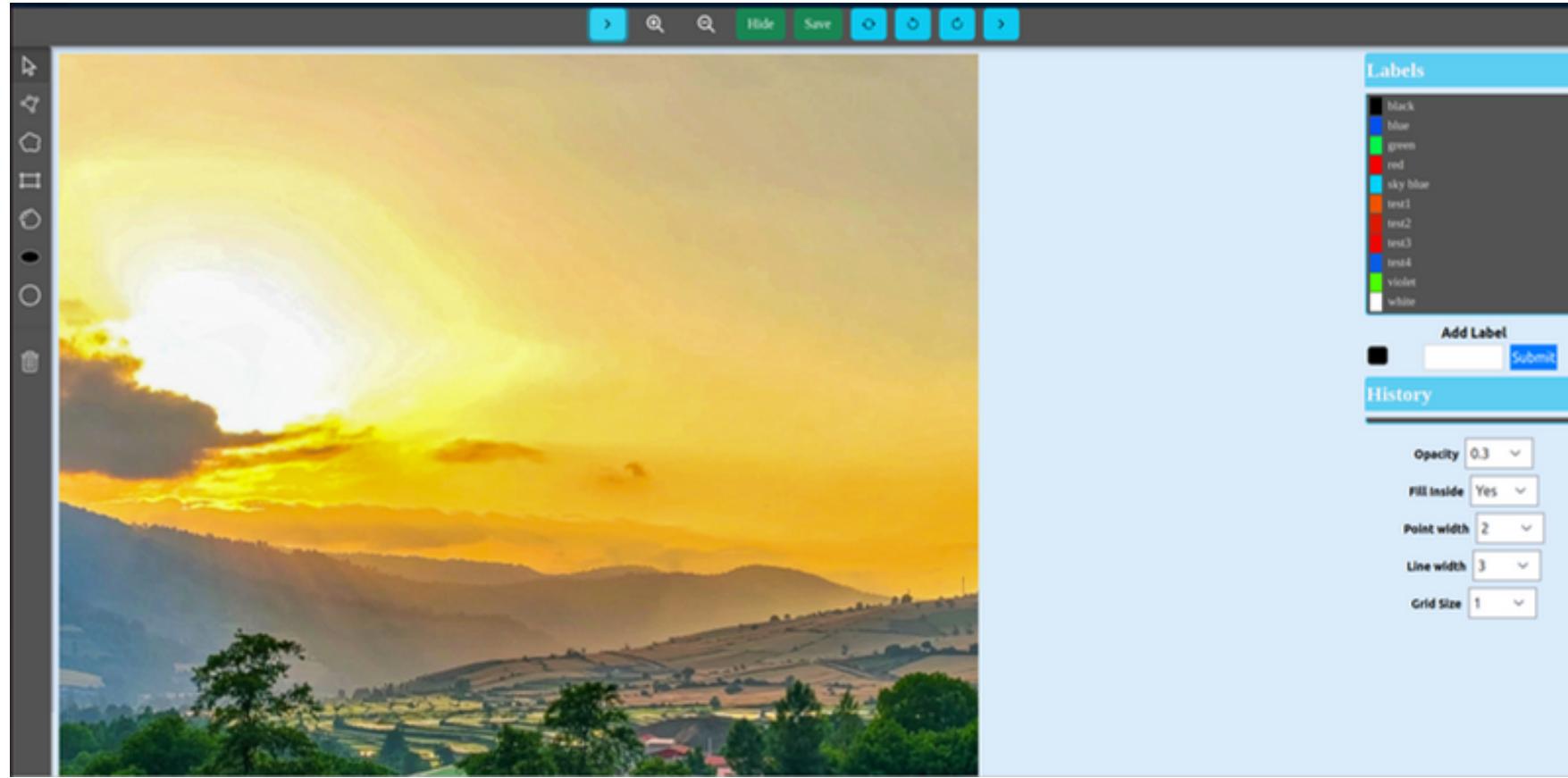




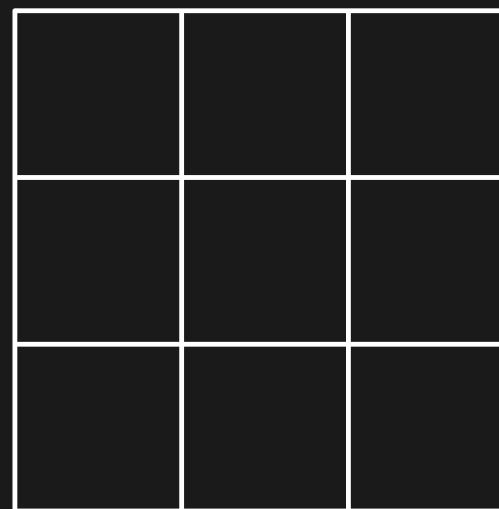
LEFT & RIGHT COLLAPSIBLE PANELS

Collapsible panels improve the viewing experience by increasing the area occupied by the annotation viewer

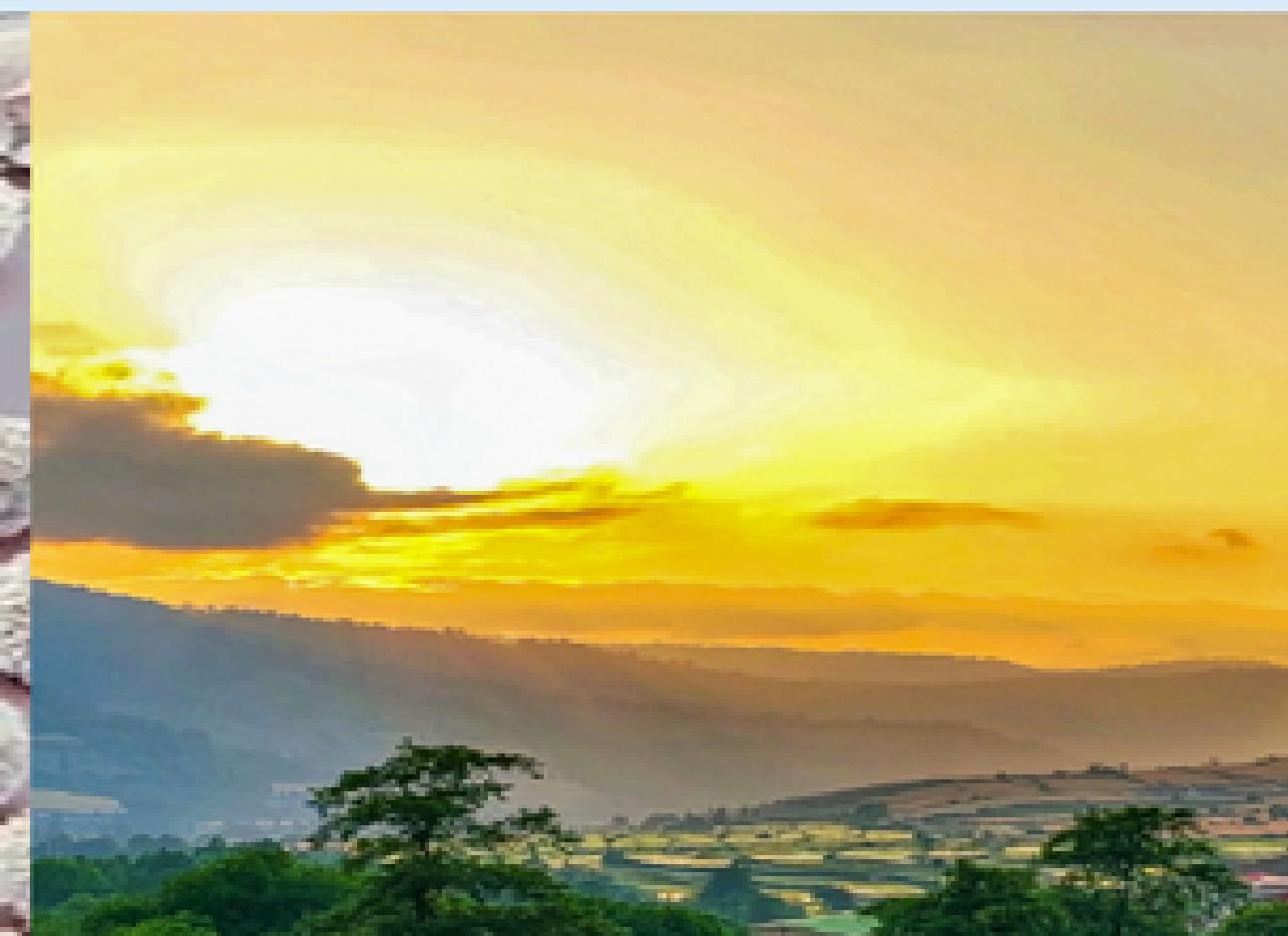
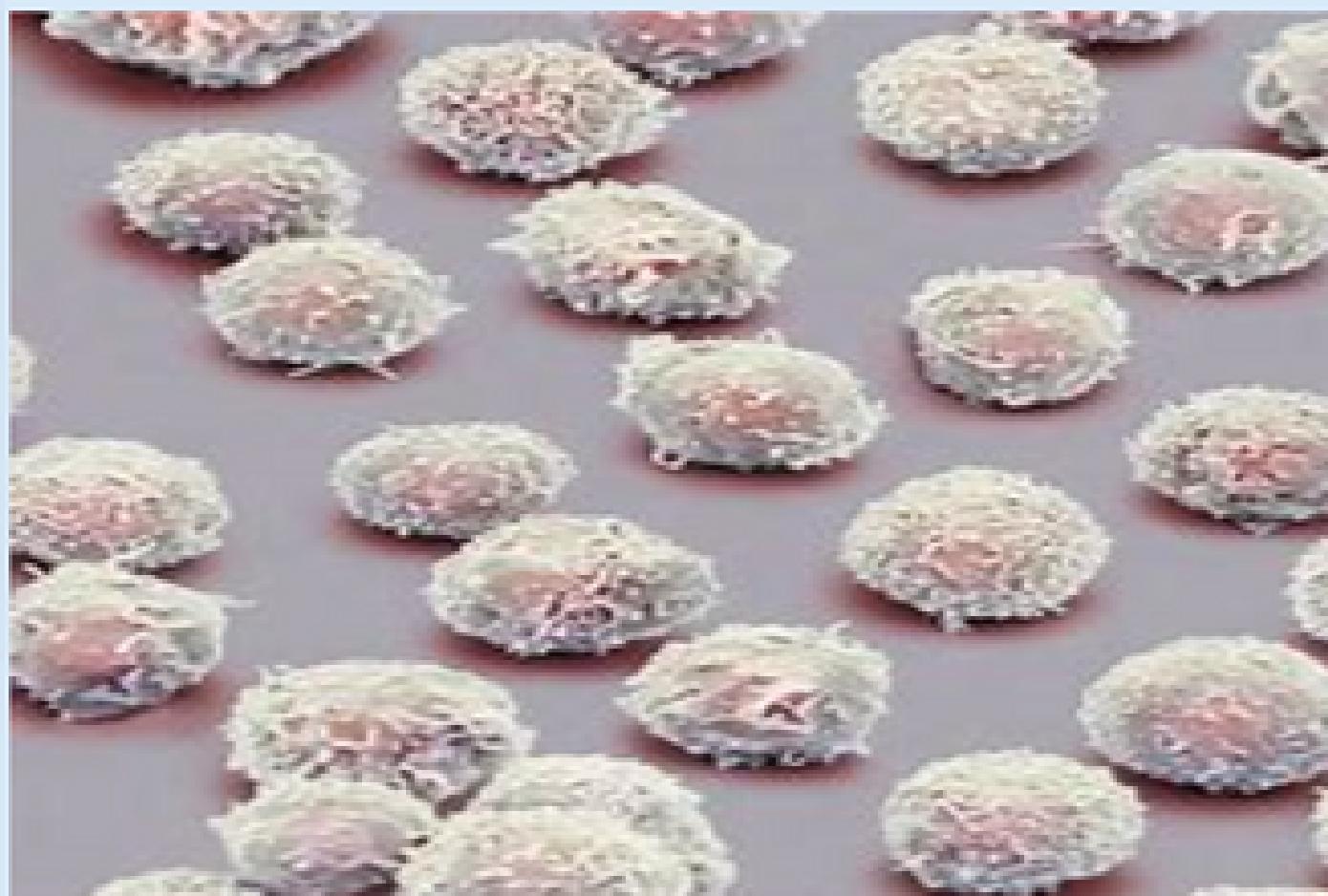
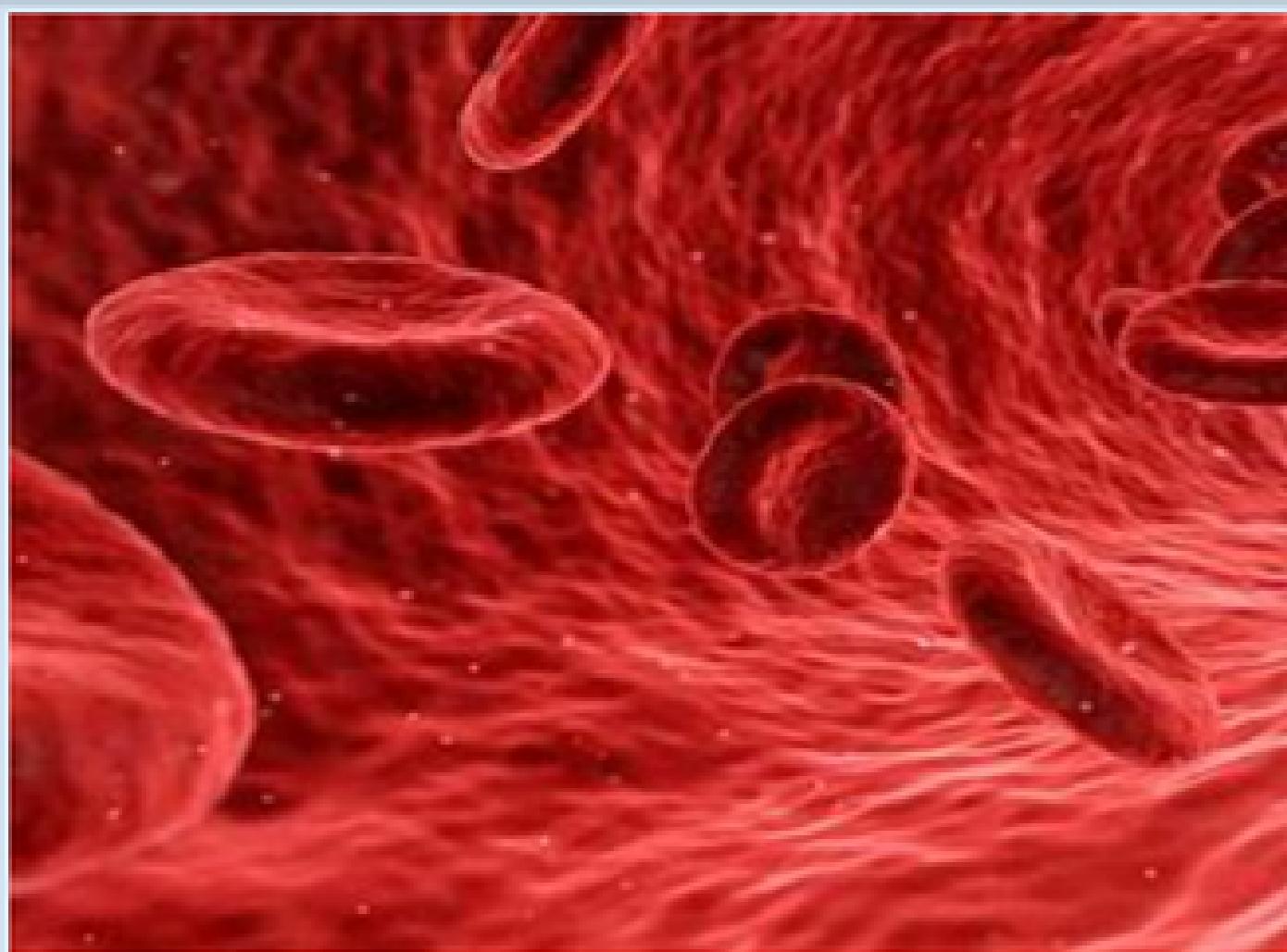




GRID LAYOUT



Feature to load multiple images into the viewer simultaneously in the desired layout



Labels

- black
- blue
- dummy
- pink
- sky blue

Add Label

History

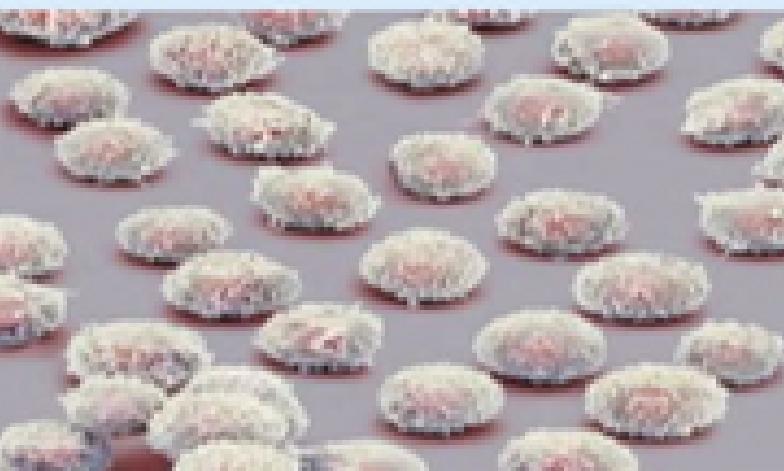
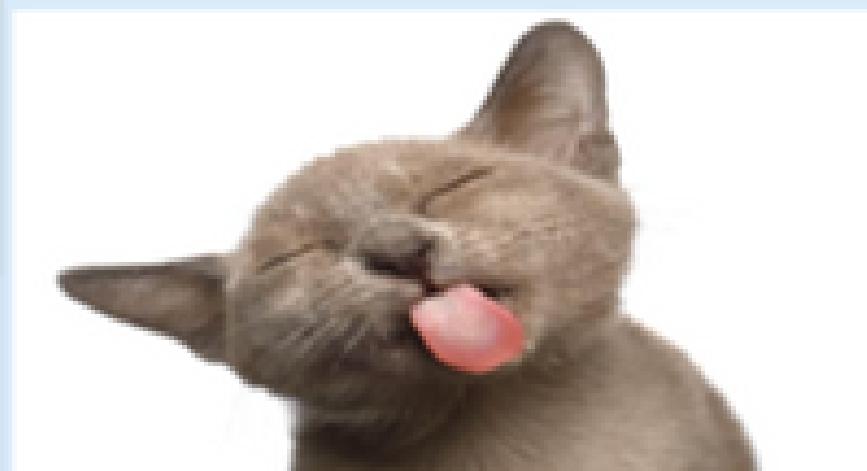
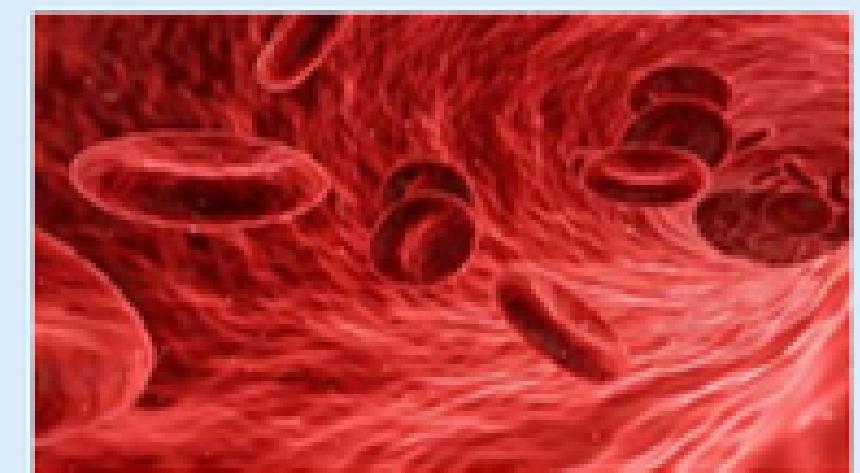
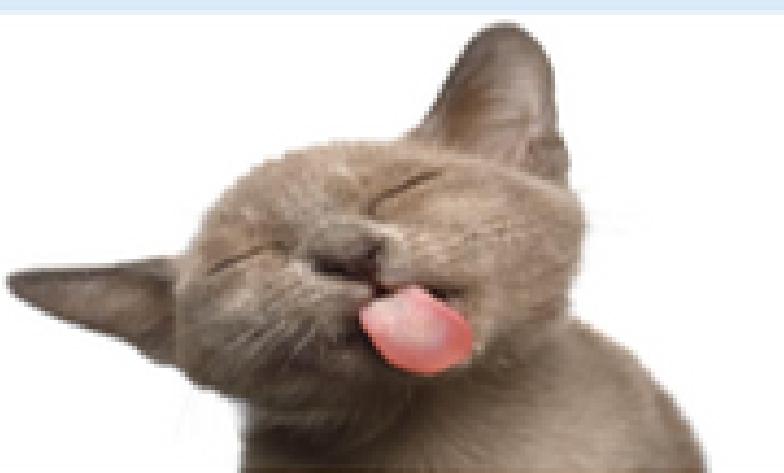
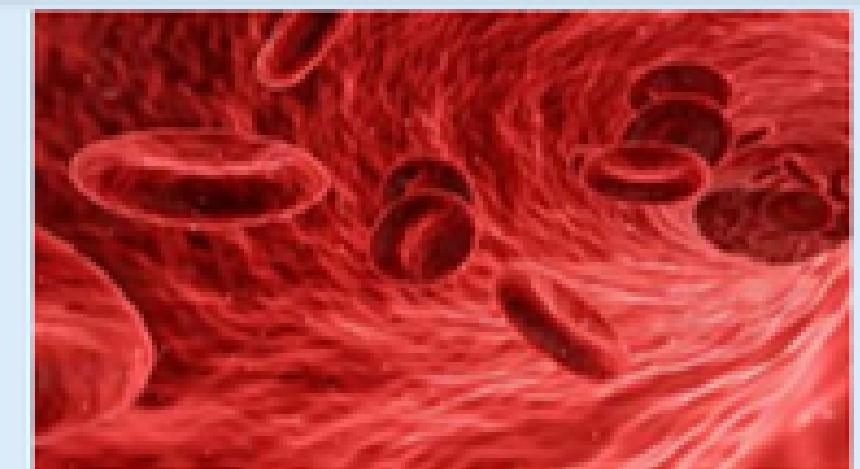
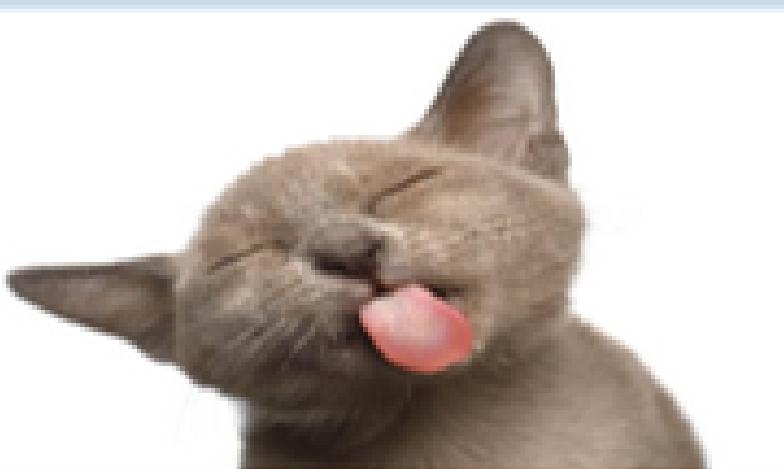
Opacity

Fill Inside

Point width

Line width

Grid Size



Labels

- black
- blue
- dummy
- pink
- sky blue

Add Label



Submit

History

Opacity 0.3

Fill Inside No

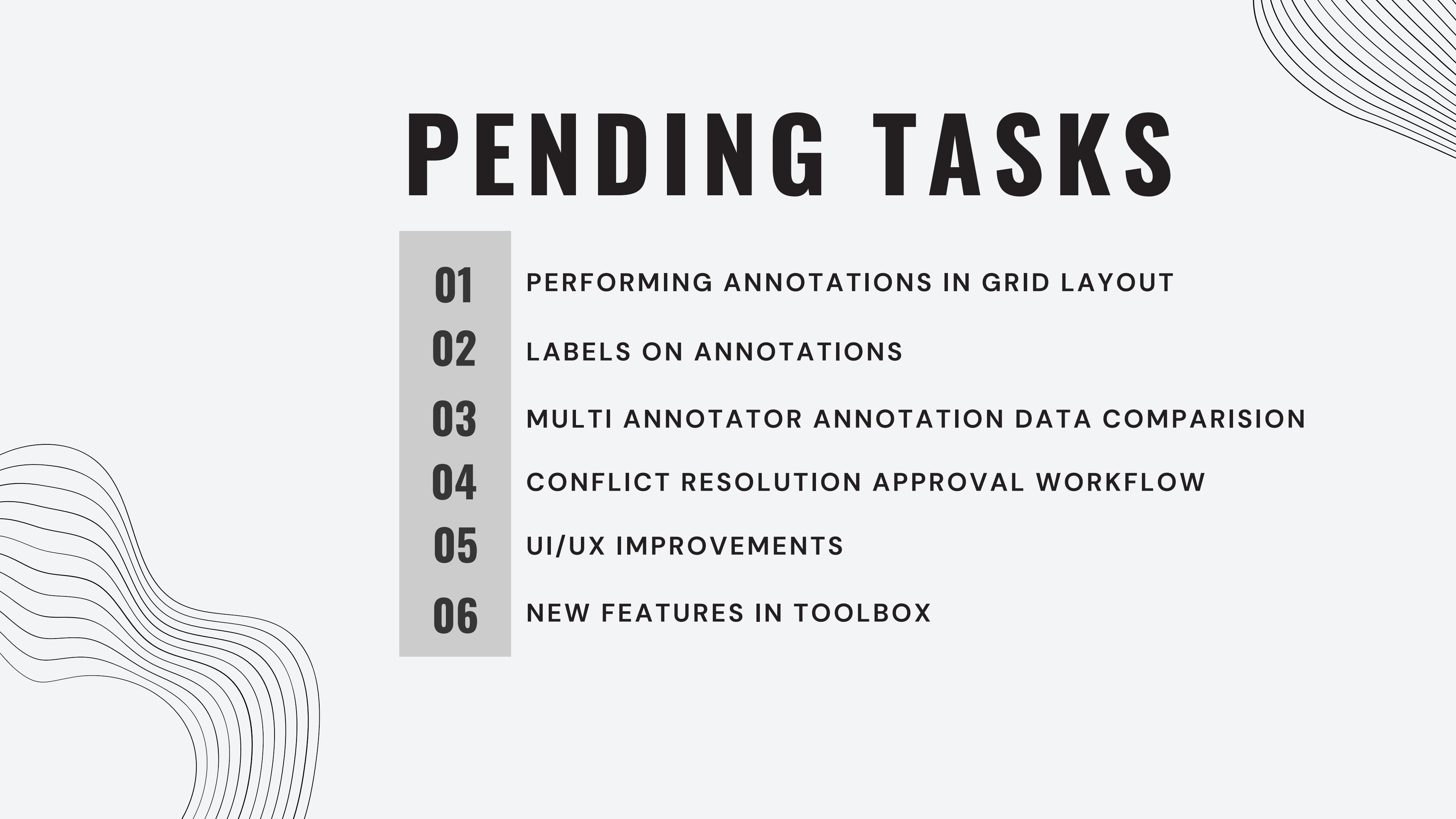
Point width 2

Line width 3

Grid Size 3



PENDING TASKS

- 
- 01** PERFORMING ANNOTATIONS IN GRID LAYOUT
 - 02** LABELS ON ANNOTATIONS
 - 03** MULTI ANNOTATOR ANNOTATION DATA COMPARISON
 - 04** CONFLICT RESOLUTION APPROVAL WORKFLOW
 - 05** UI/UX IMPROVEMENTS
 - 06** NEW FEATURES IN TOOLBOX

DATA FOUNDATION SYSTEMS

MORE FEATURES

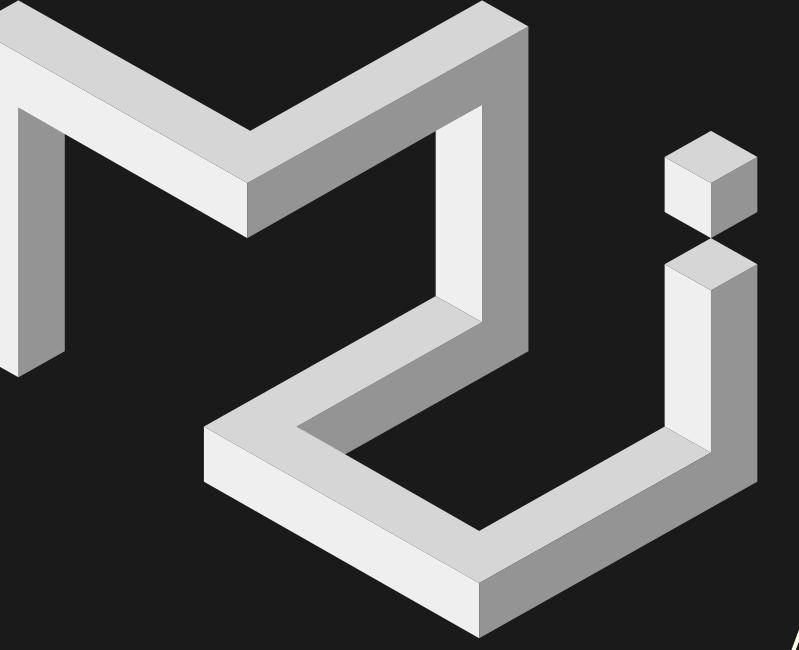
IMAGE ANNOTATION TOOLBOX



DepthFirstSearch

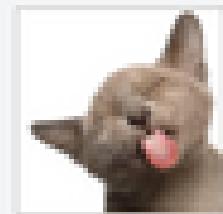
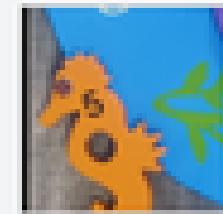
October 29 , 2023

IMPROVED UI



Changed the appearance of the site with more
accessible sidebar

No file chosen

QIP (1).jpeg Sample-Celle... Screenshot 2... Screenshot f... Screenshot f... download.jpeg ho-hyou-qEO... images (1).jpeg 

C Q S H S O O O >

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

C

Q

S

H

S

O

O

O

>

Labels

- █ black
- █ blue
- █ green
- █ red
- █ sky blue
- █ test1
- █ test2
- █ test3
- █ test4
- █ violet
- █ white

History

Opacity

Fill Inside

Point width

Line width

Grid Size



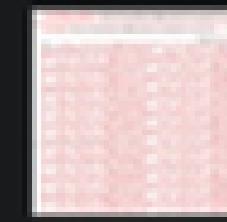
008d57db-3... □



016d74af-14... □



030ec956-37... □



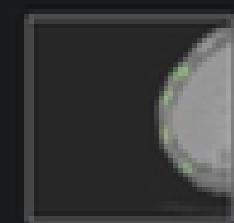
092b852c-61... □



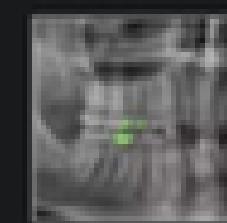
094ca26d-ce... □



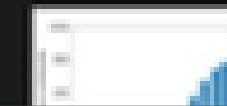
0995713b-6... □



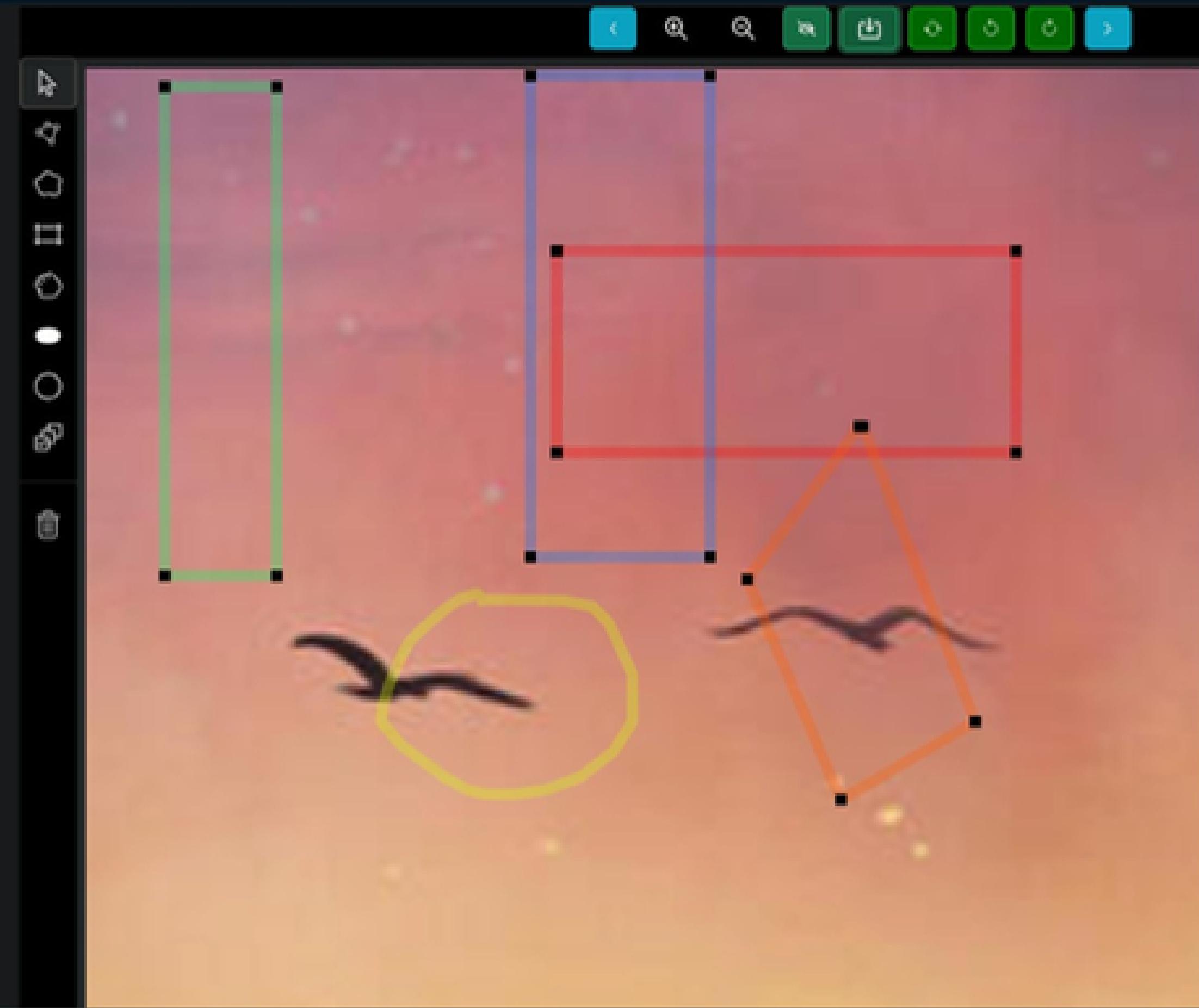
106d7de5-3... □



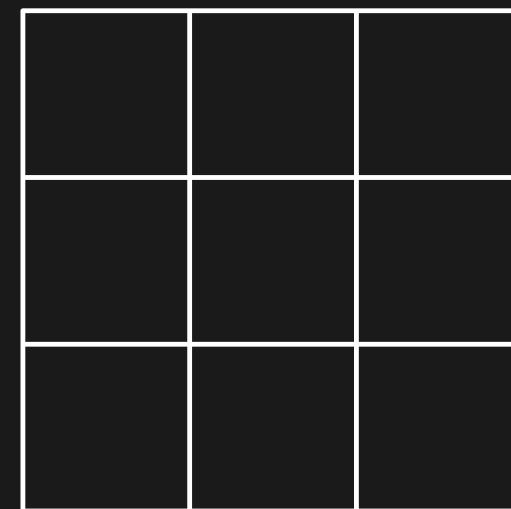
18e1f1b5-1a... □



008d57db-3... □



GRID LAYOUT



Labels

Labels

black

blue

green

orange

red

white

History

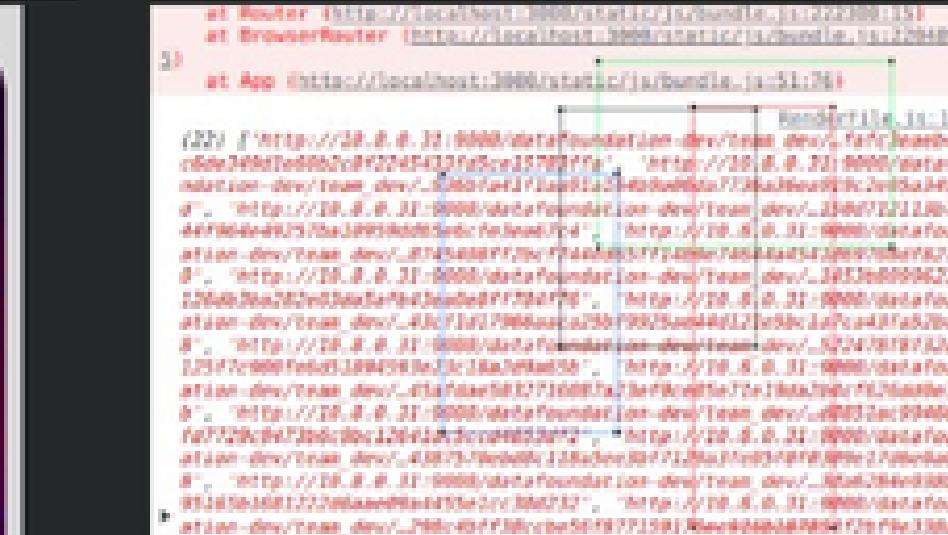
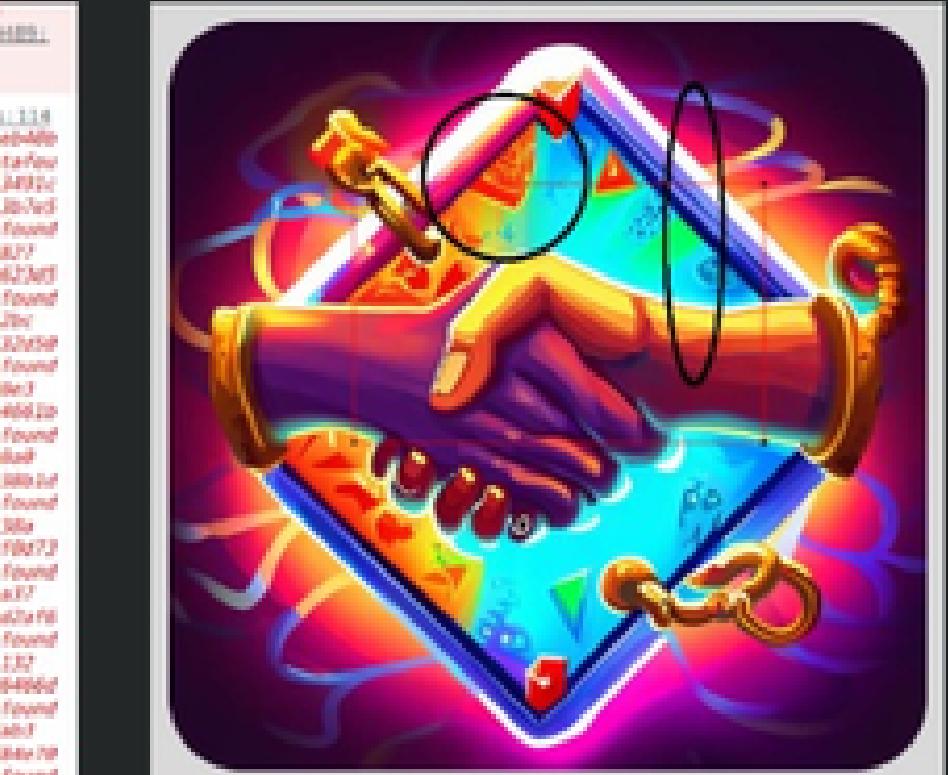
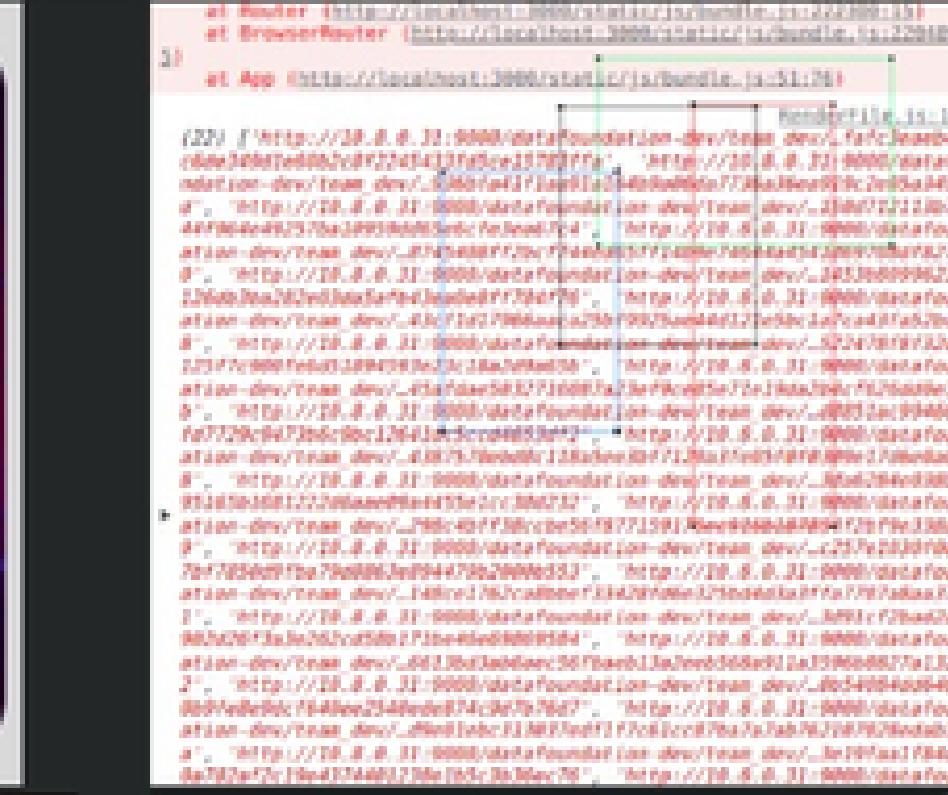
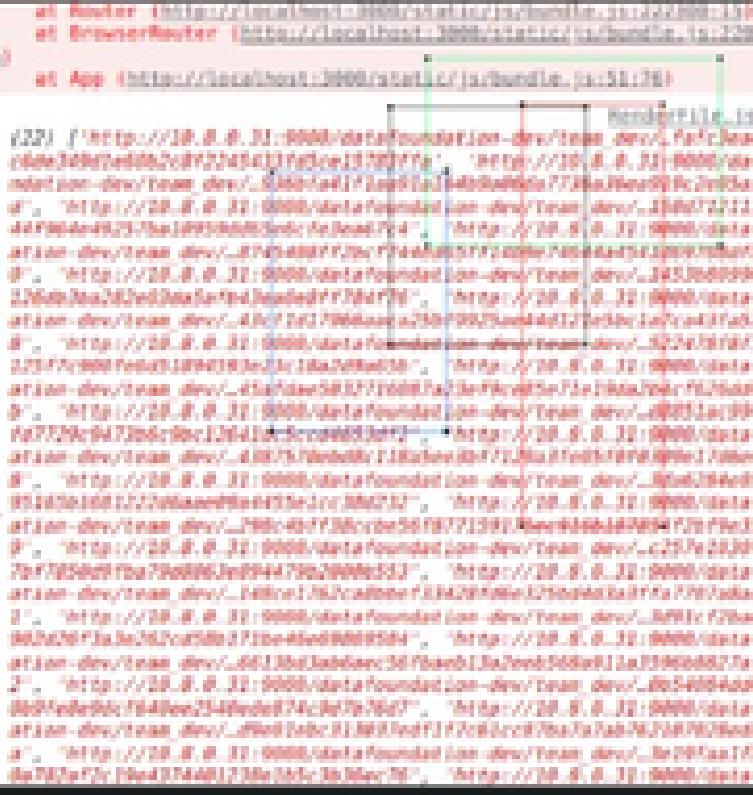
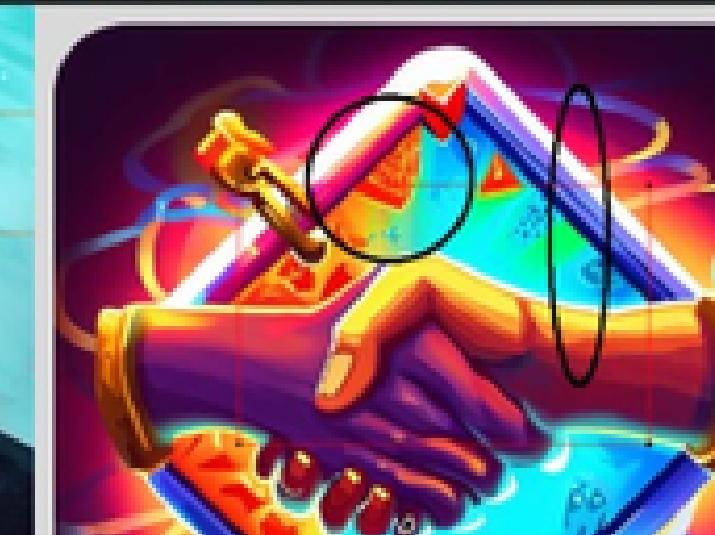
Region Configuration

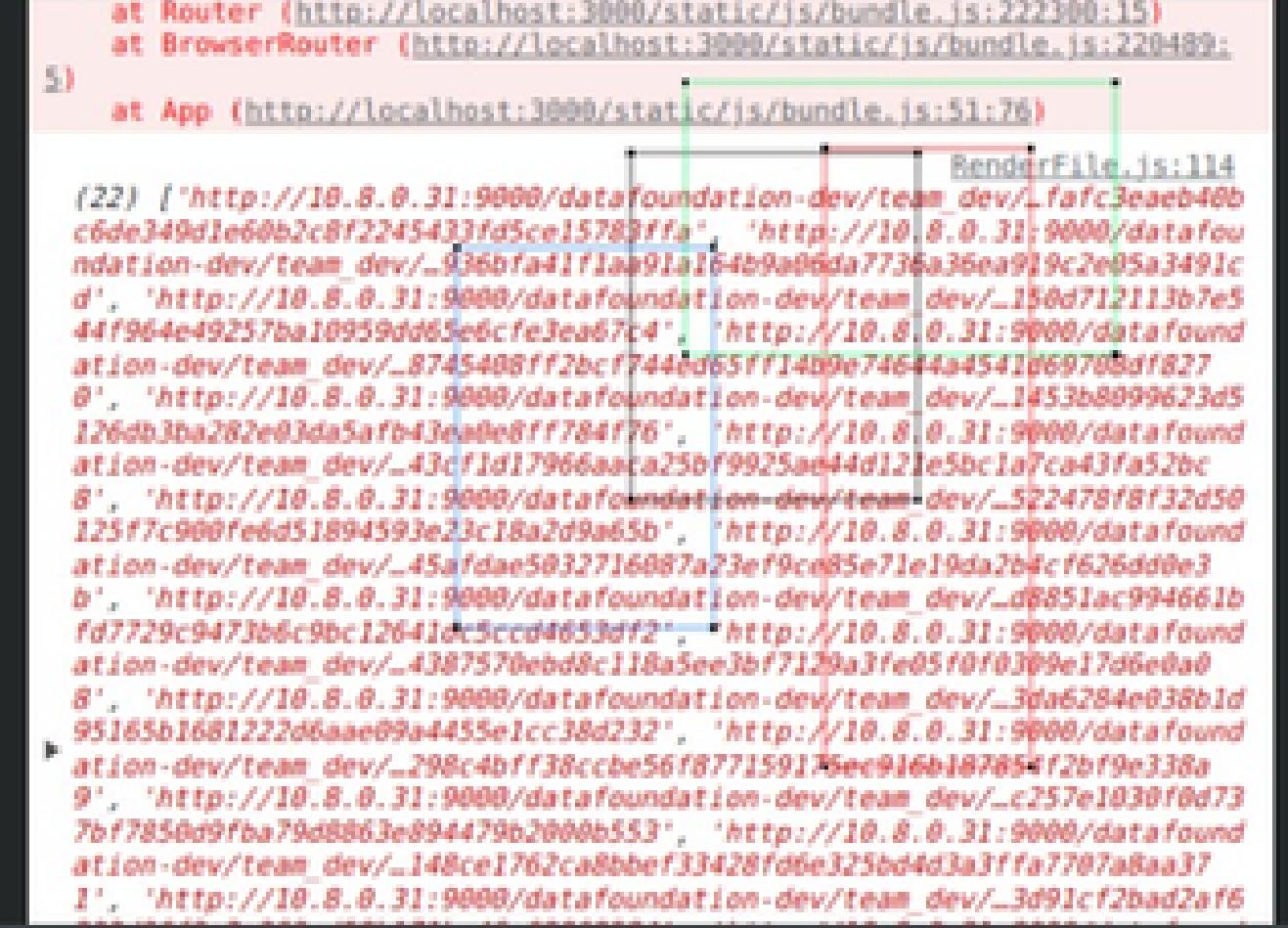
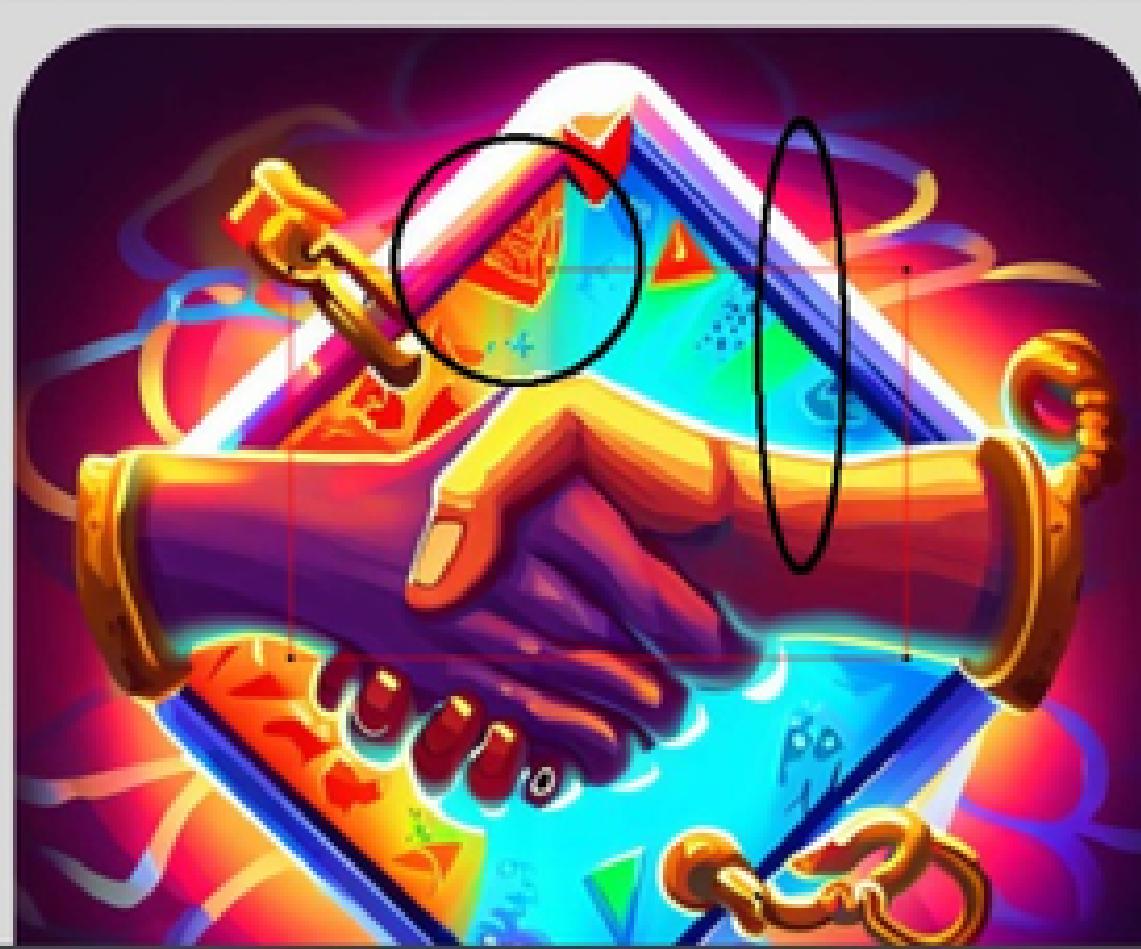
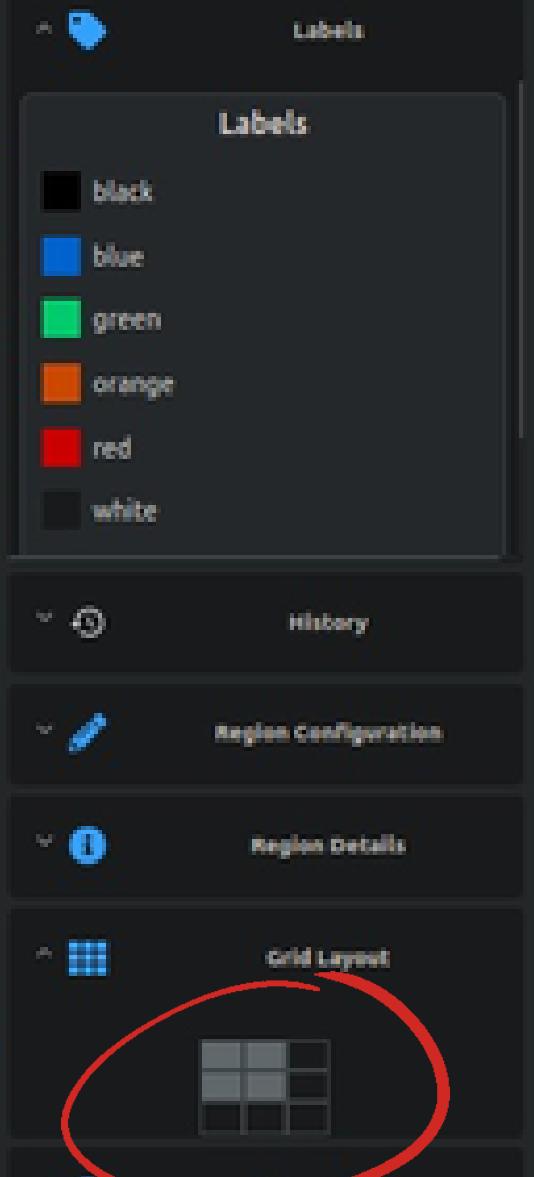
Region Details



Region Selector

Image Comments





Labels

Labels
black
blue
green
orange
red
white

History

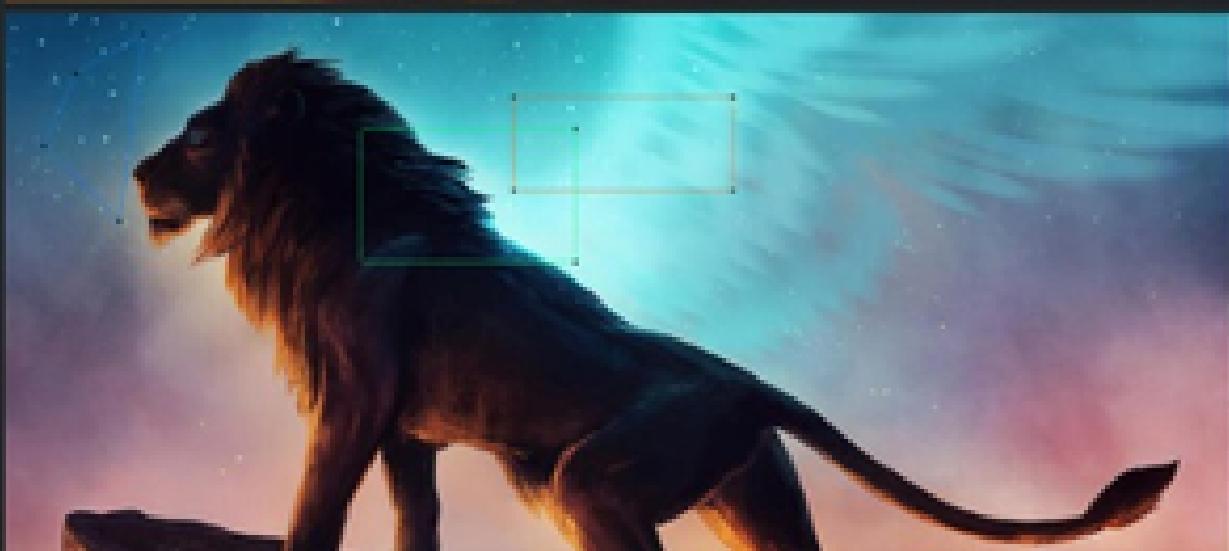
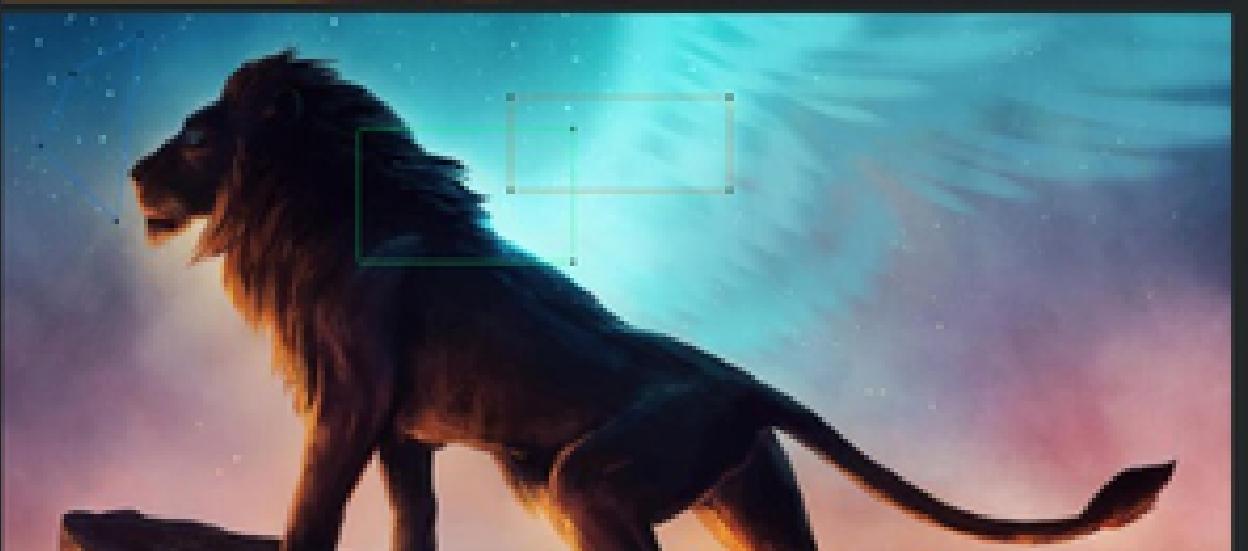
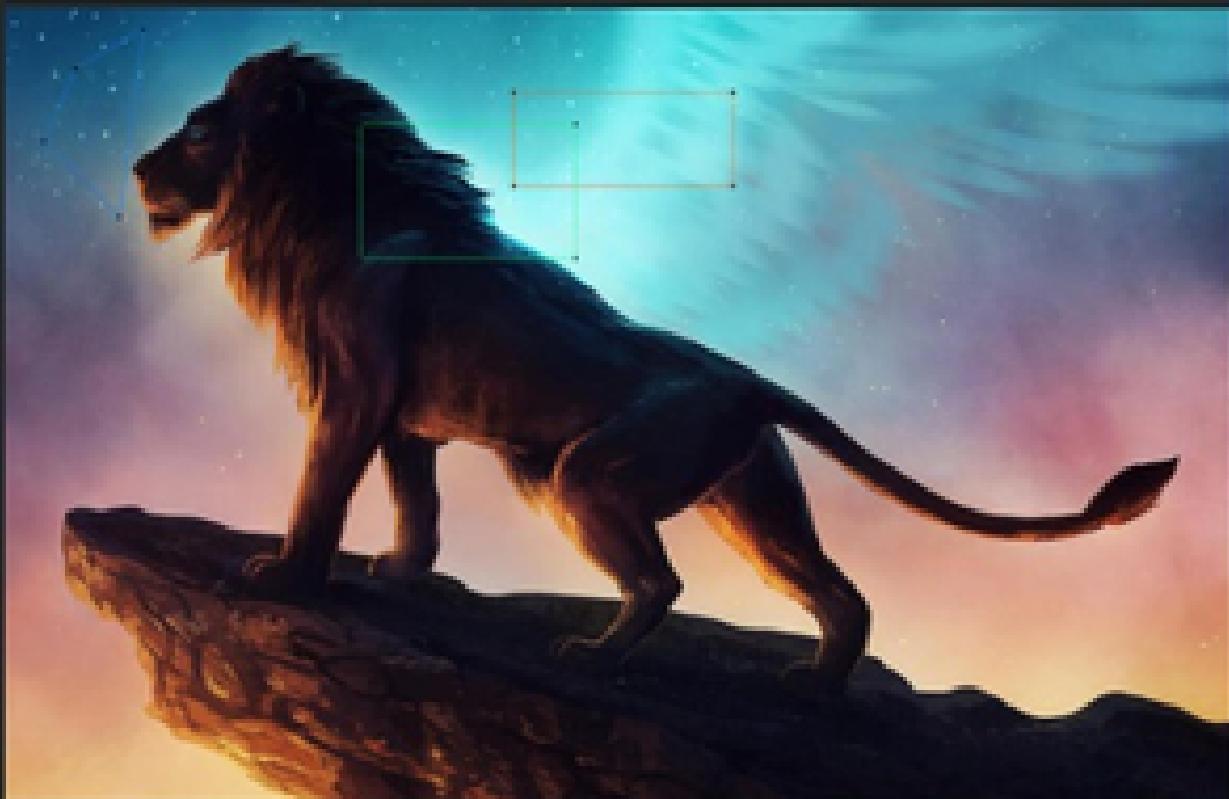
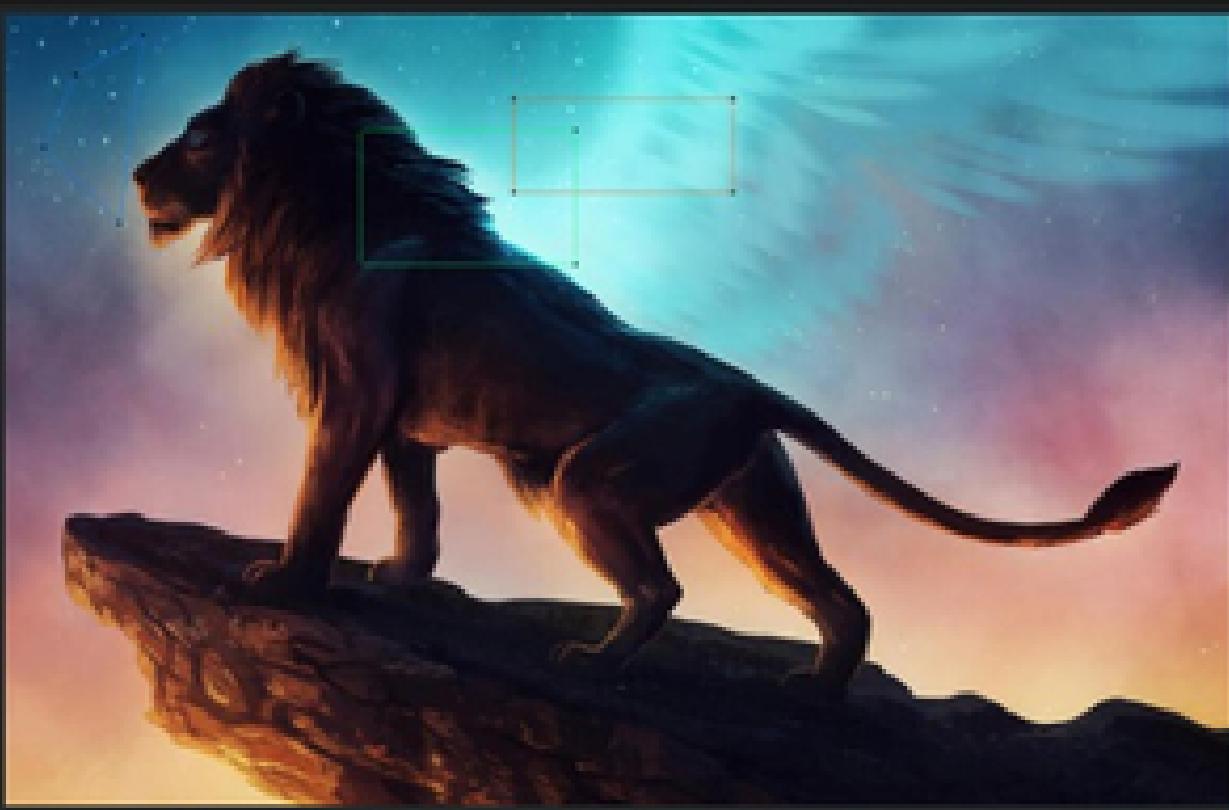
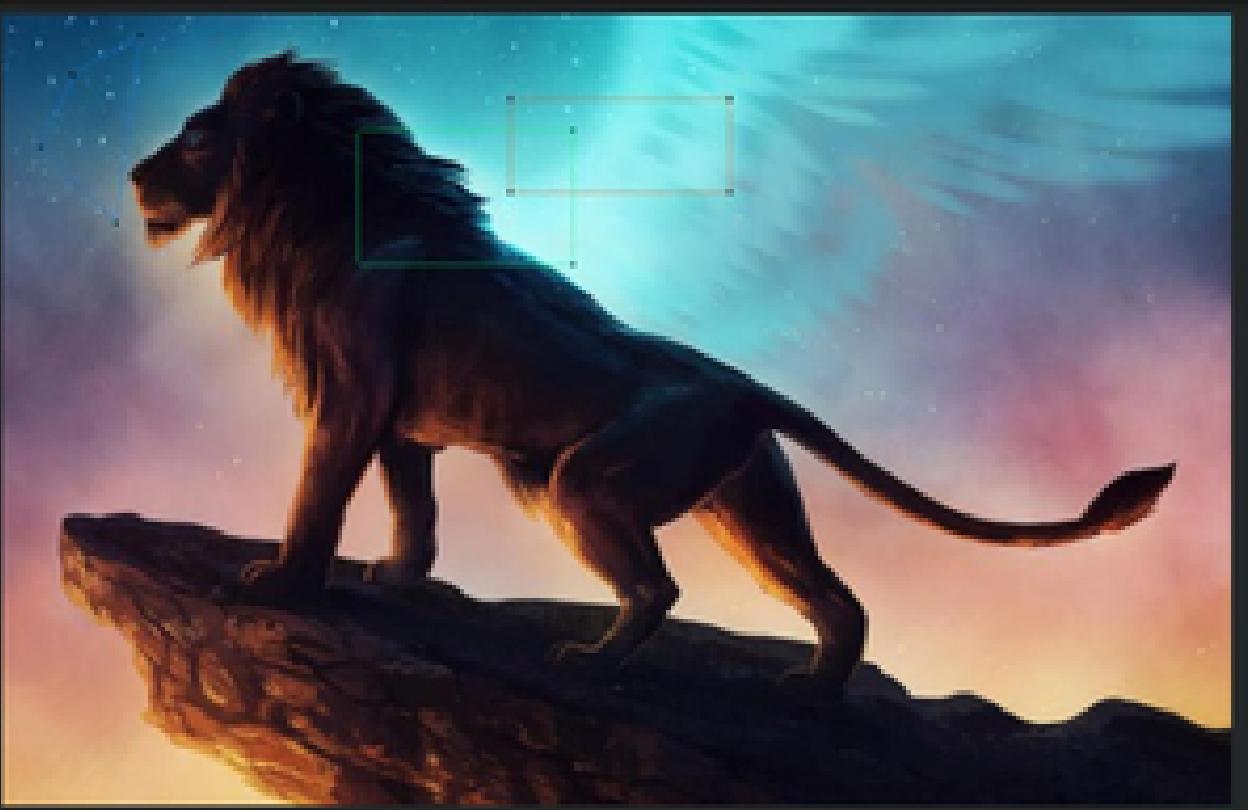
Region Configuration

Region Details

Grid Layout

Region Selector

Image Comments



My Projects



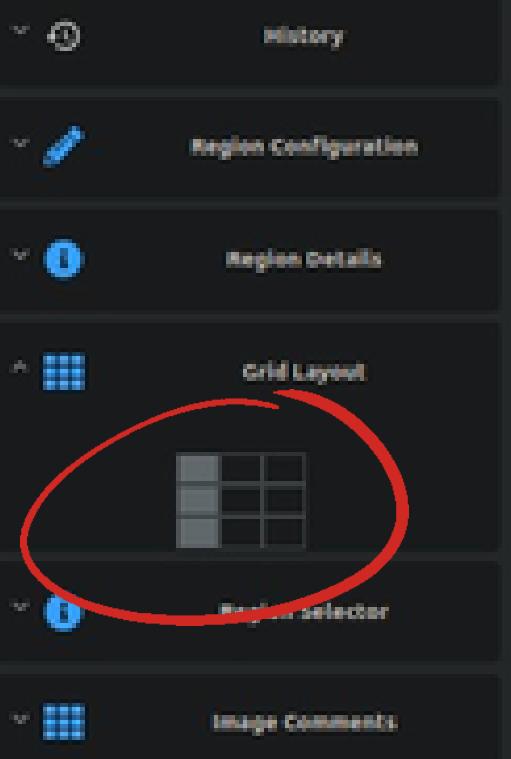
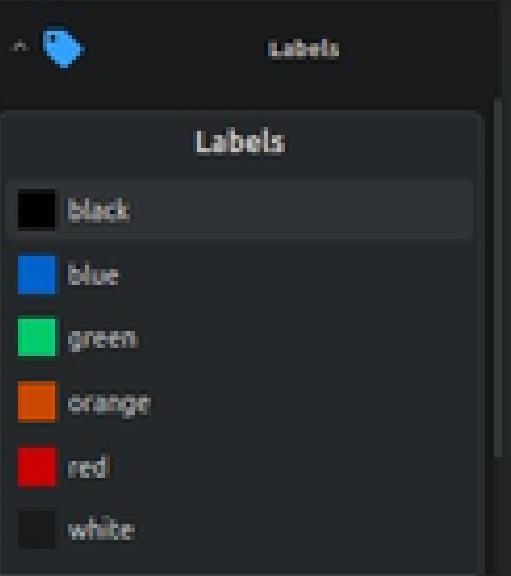
NAME	DESCRIPTION	ACTIONS	CREATED AT
meet	meet	View Download Add Info	2023-08-10T11:51:12.000Z
dfs_meet	dfs_meet	View Download Add Info	2023-08-21T11:11:31.000Z

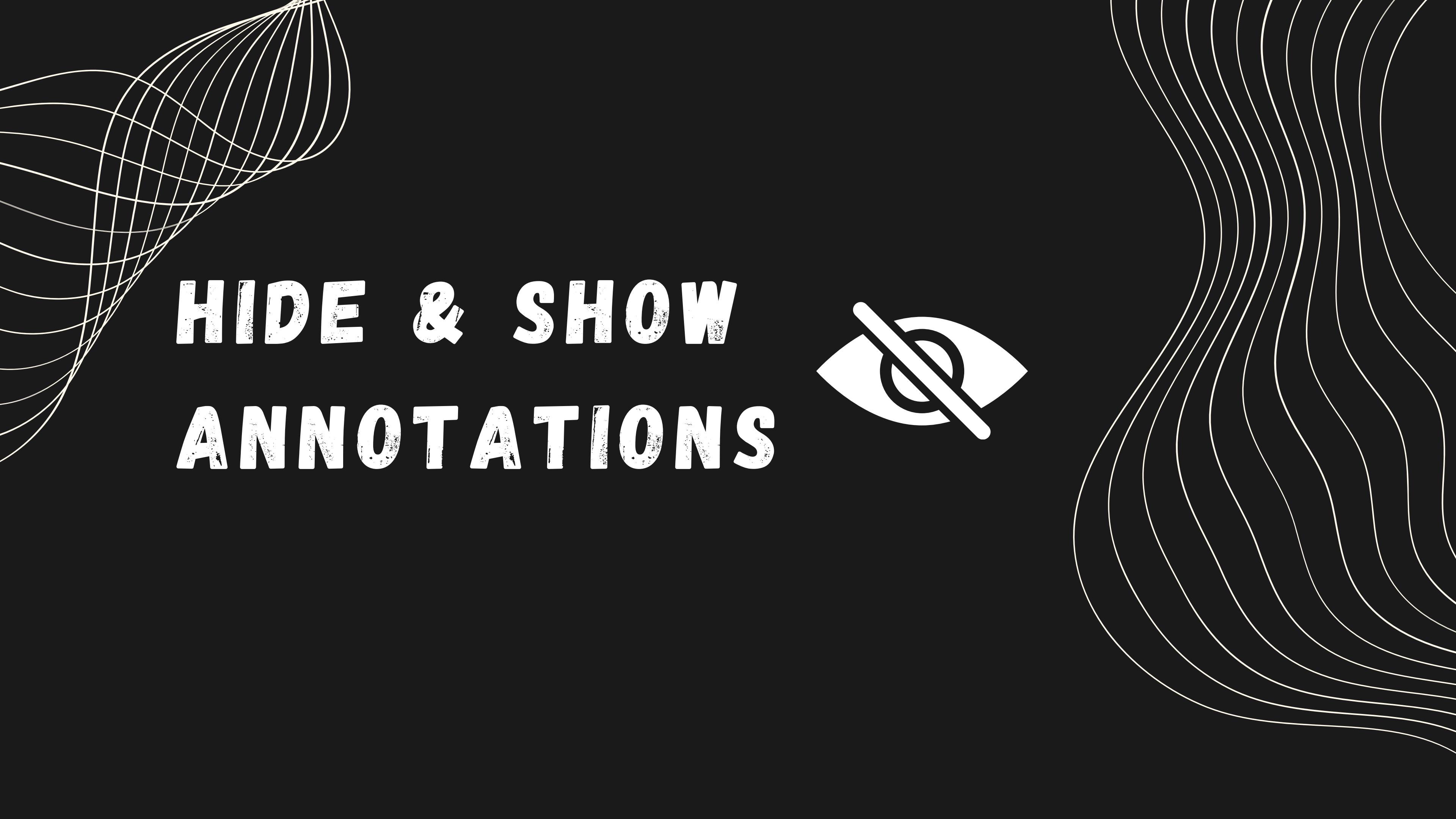
My Projects

NAME	DESCRIPTION	ACTIONS	CREATED AT
meet	meet	View Download Add Info	2023-08-10T11:51:12.000Z
dfs_meet	dfs_meet	View Download Add Info	2023-08-21T11:11:31.000Z

My Projects

NAME	DESCRIPTION	ACTIONS	CREATED AT
meet	meet	View Download Add Info	2023-08-10T11:51:12.000Z

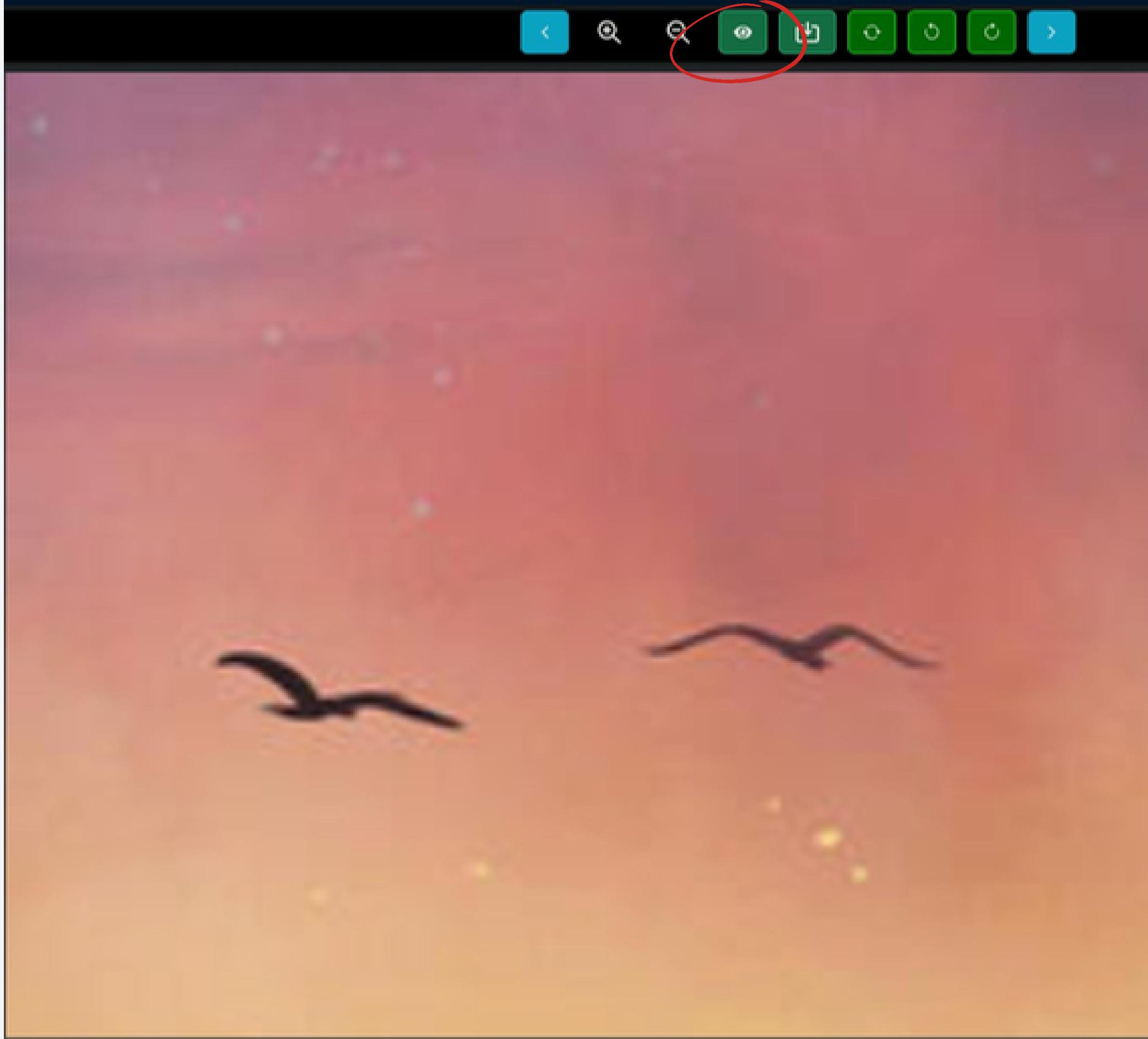




**HIDE & SHOW
ANNOTATIONS**

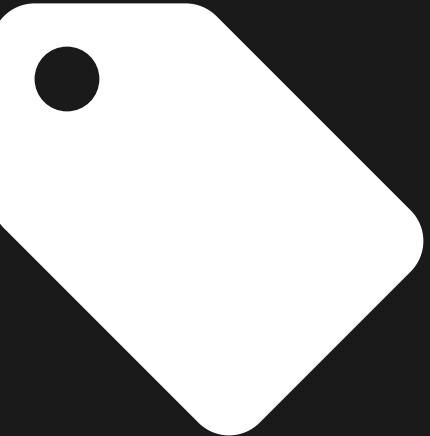








LABELS & COMMENTS FOR REGIONS

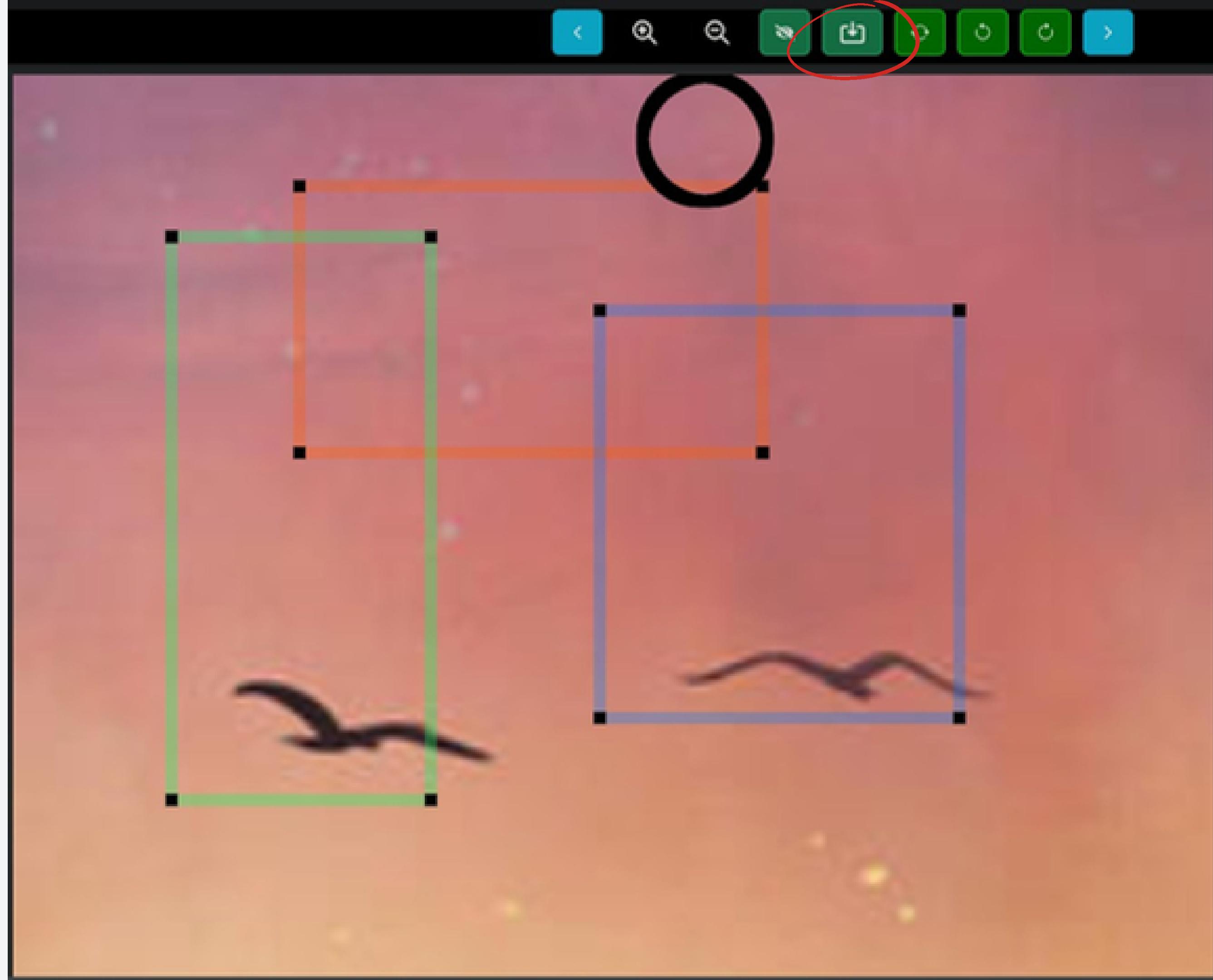


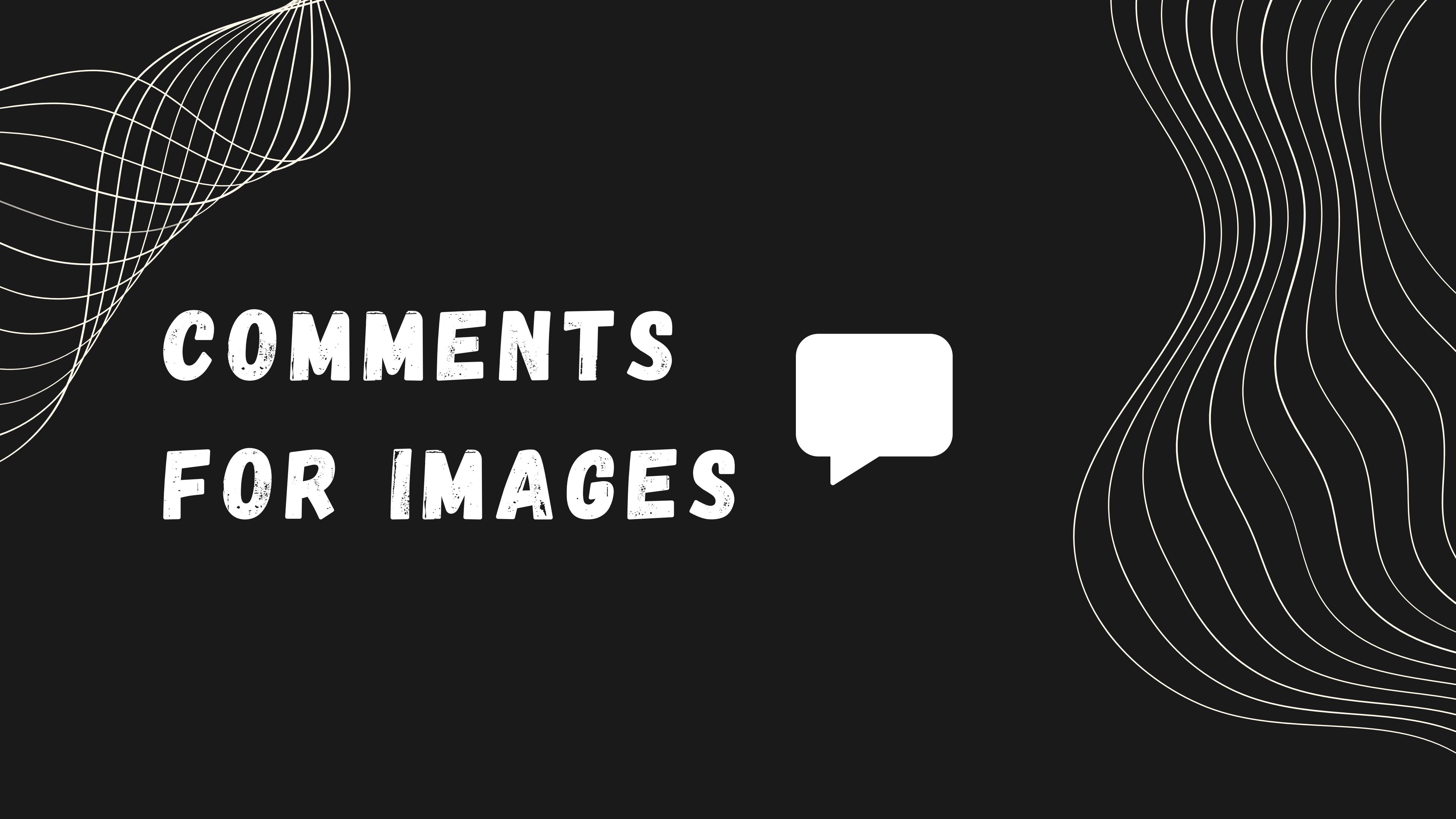




**ANNOTATIONS
SAVED TO BACKEND**







**COMMENTS
FOR IMAGES**





Labels

History

Region Configuration

Region Details

Grid Layout

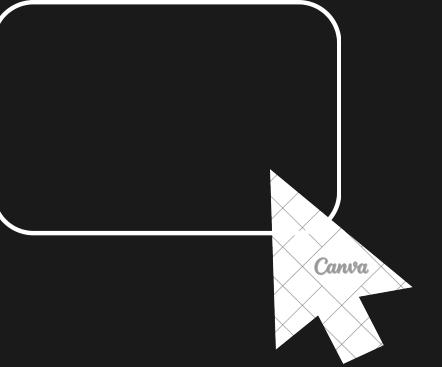
Region Selector

Image Comments

ADD COMMENT

Two crows in a red sky

REGION SELECTOR SIDEBARBOX





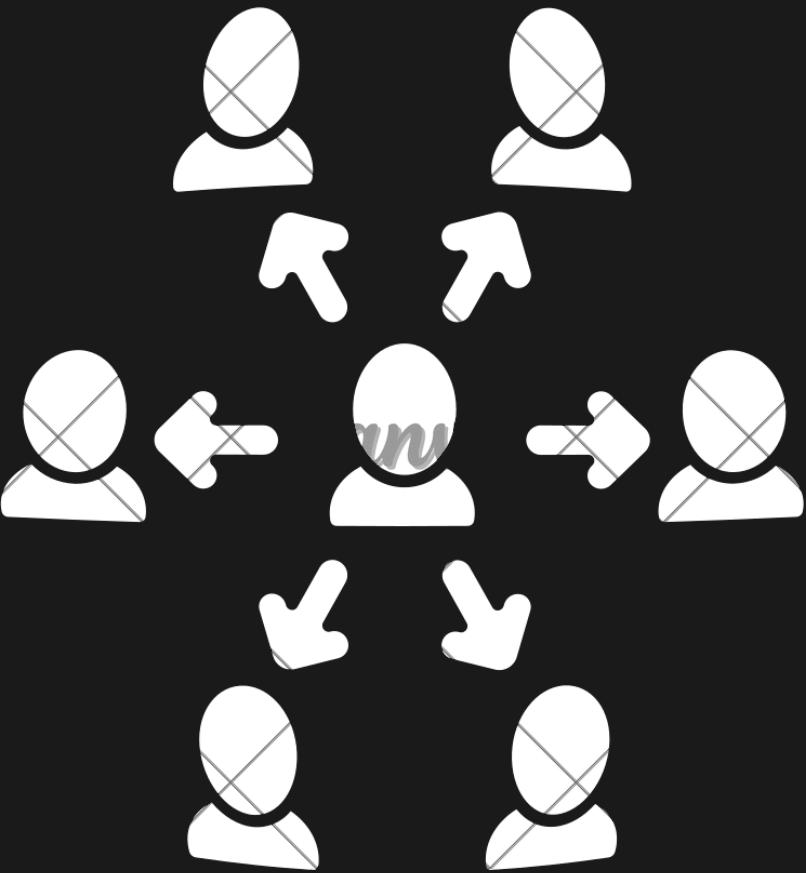
- Labels
- History
- Region Configuration
- Region Details
- Grid Layout
- Region Selector

Regions

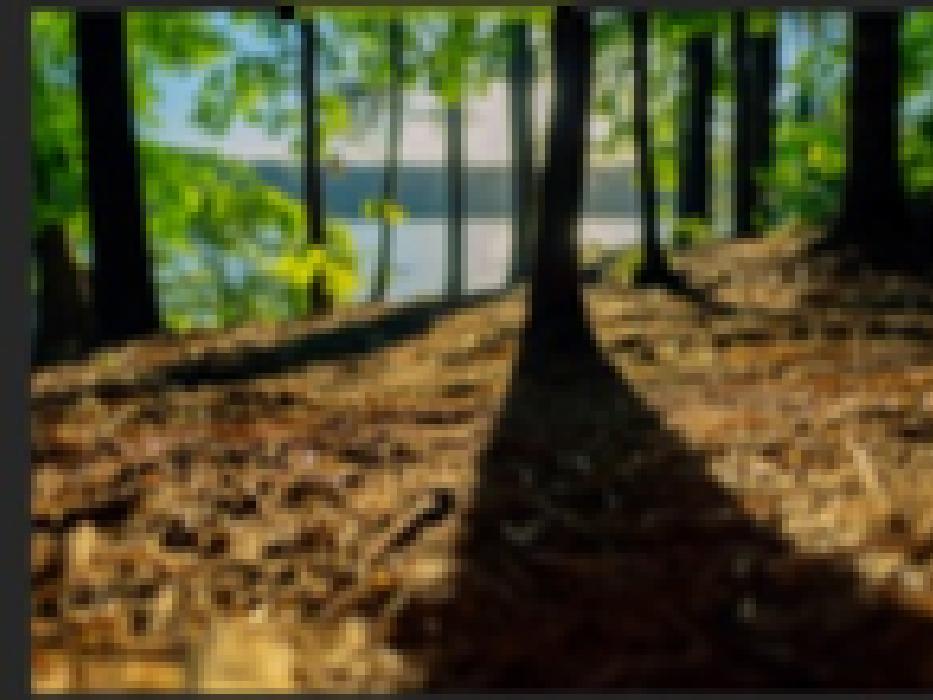
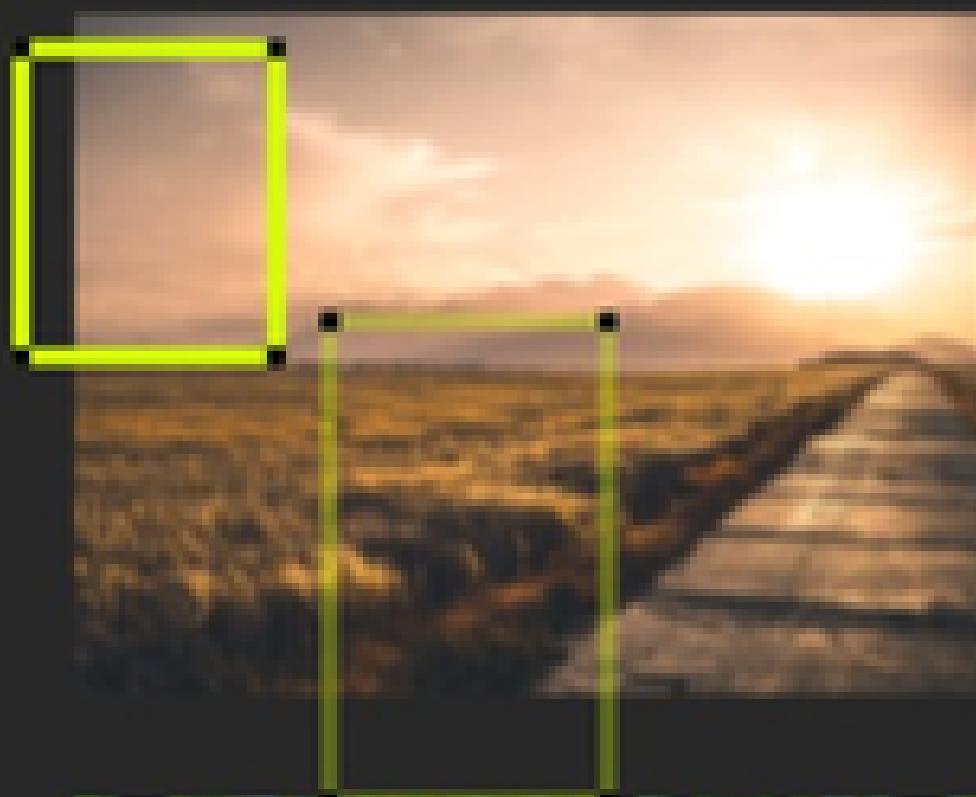
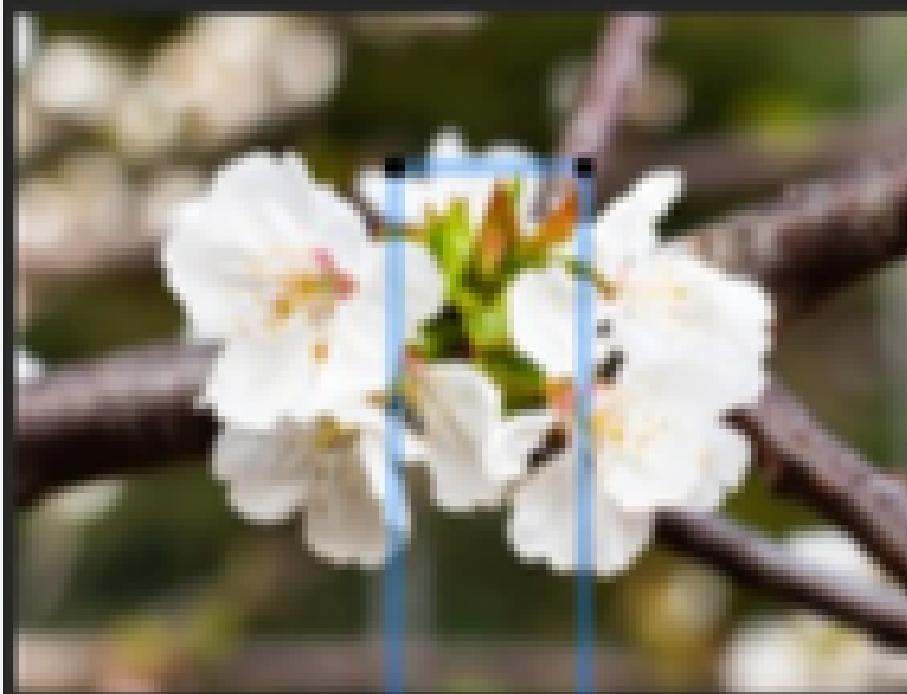
Color	Region Name	Actions
red	Red Region	
yellow	Yellow Region	
green	Green Region	
blue	Blue Region	

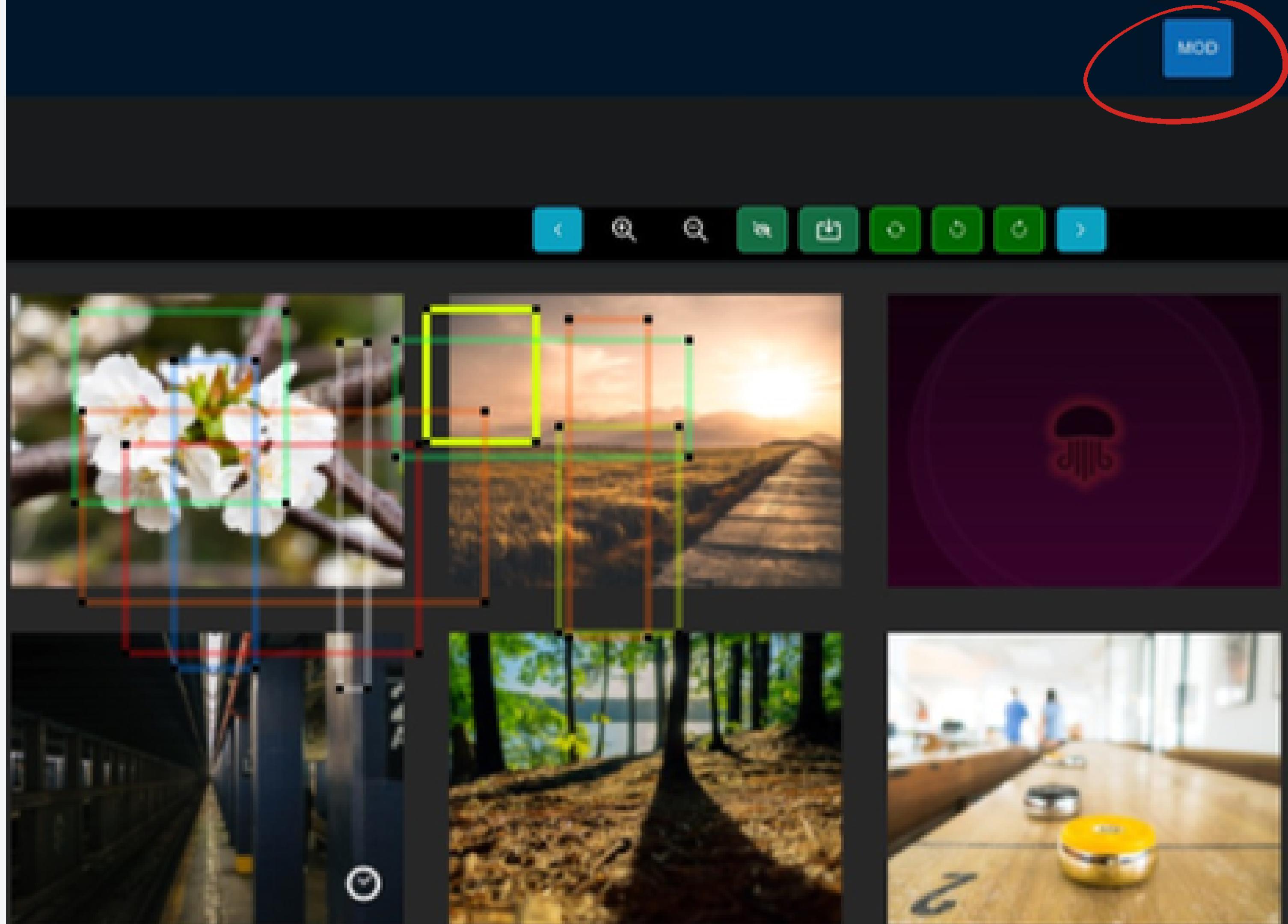
Image Comments

MODERATOR WORKFLOW



USER





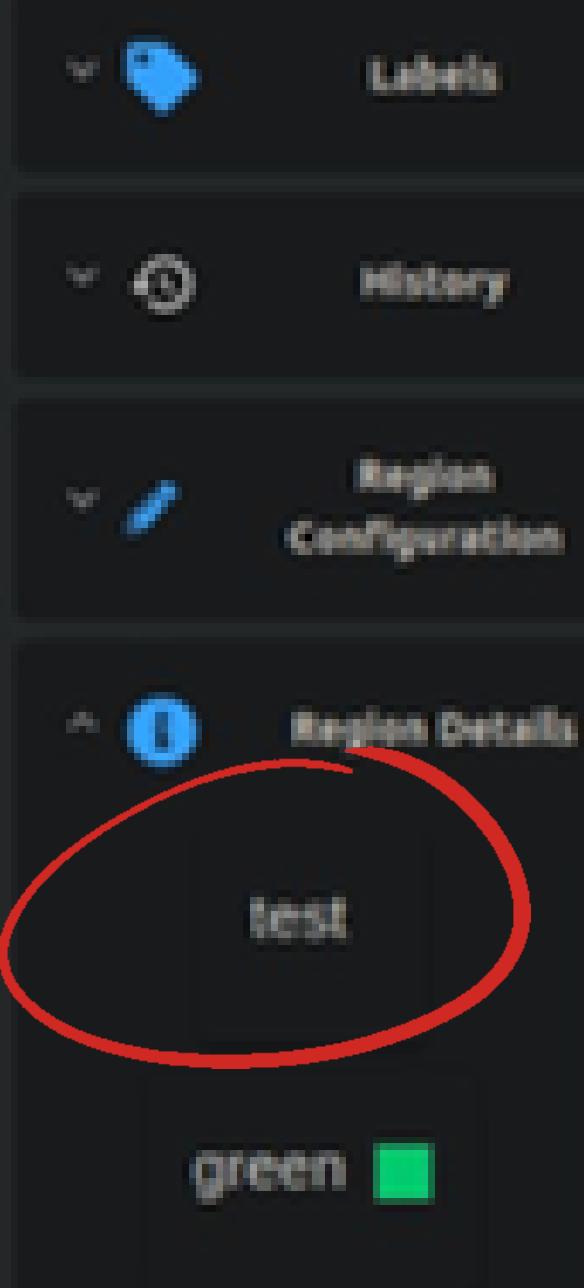
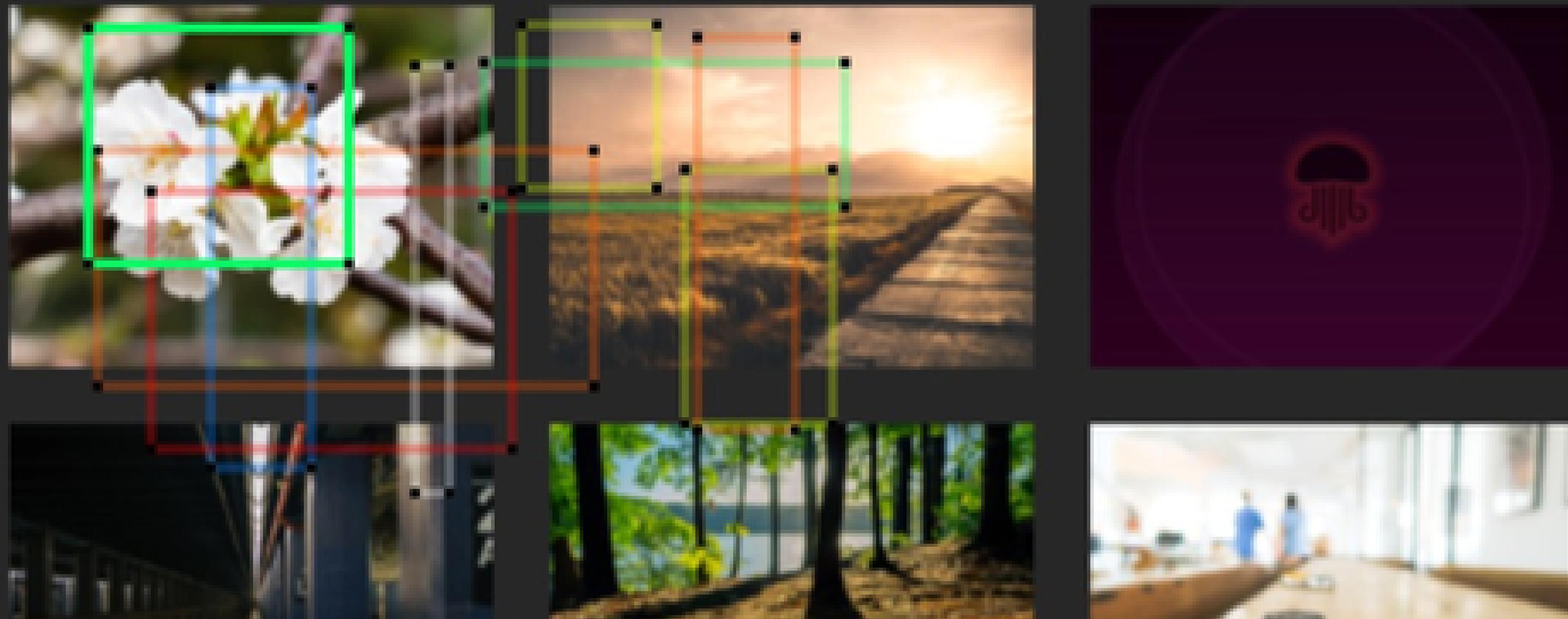
MULTI ANNOTATOR DATA COMPARISON



MOD

Dashboard

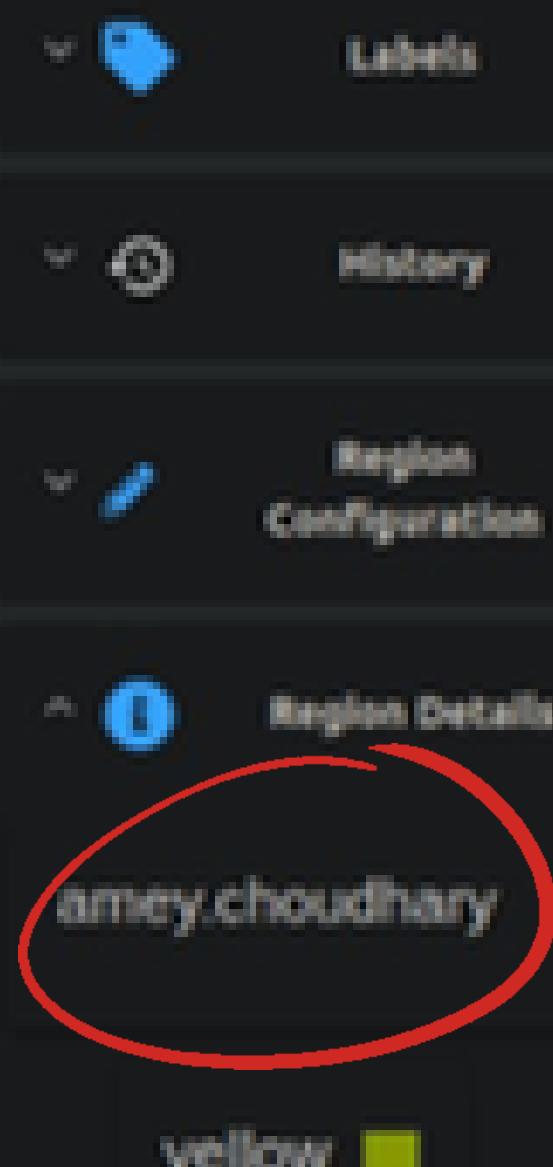
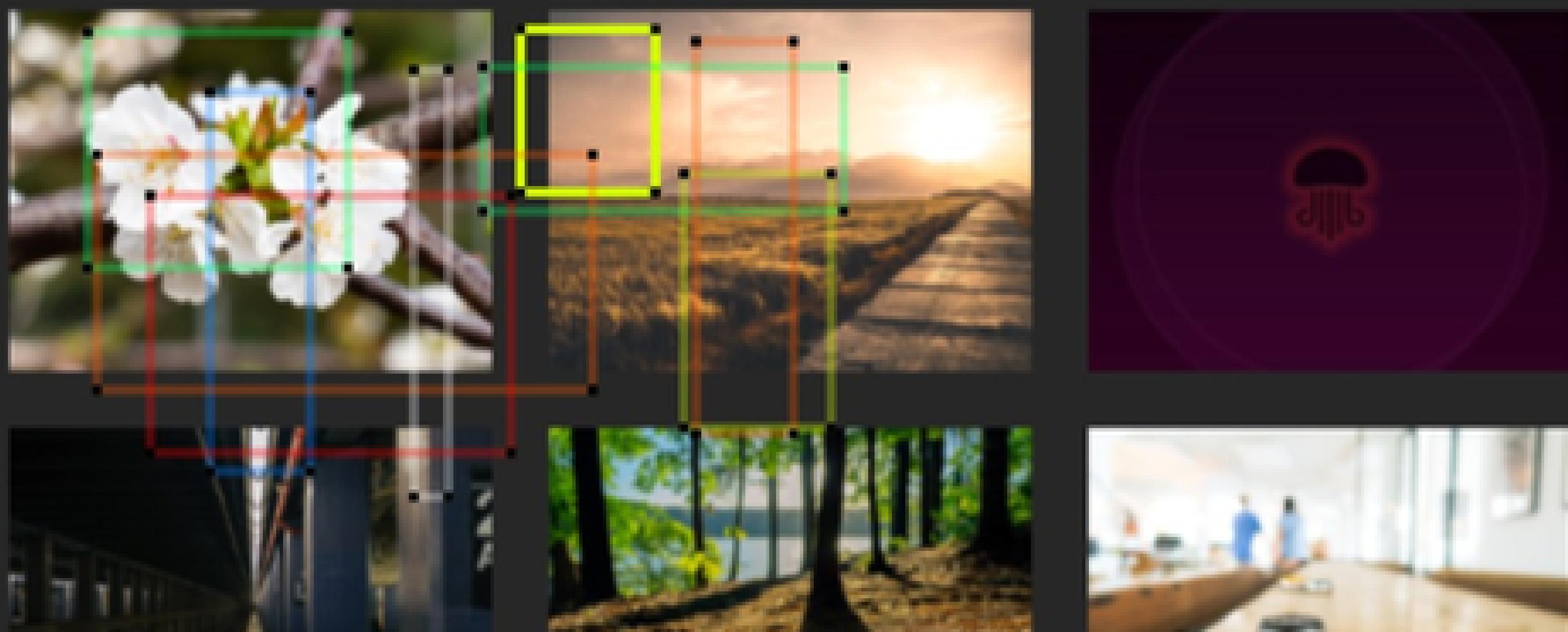
Hi Amey



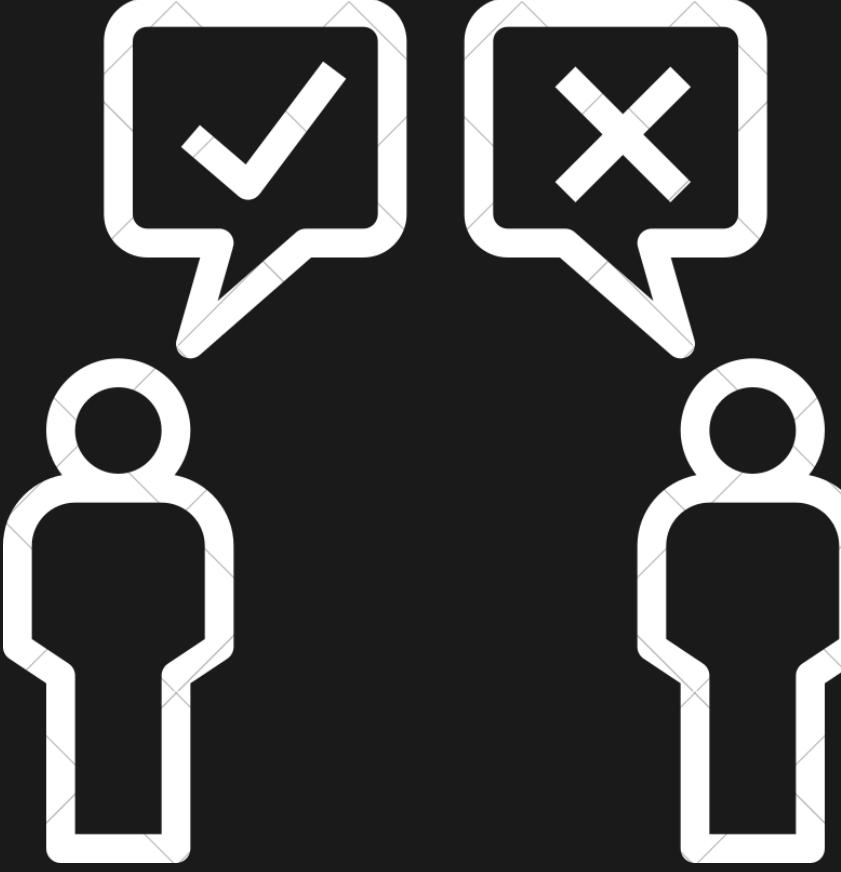
MOD

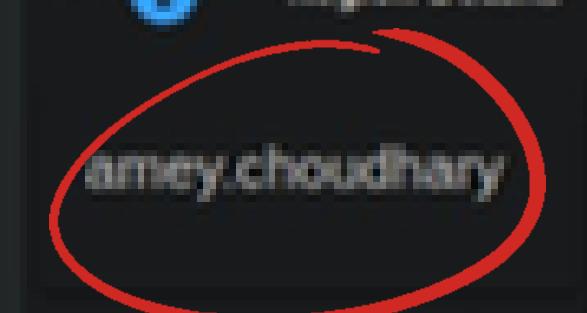
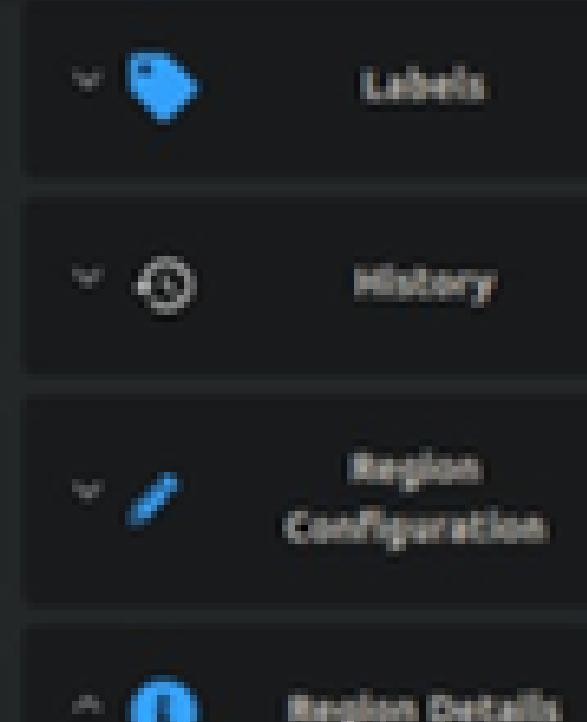
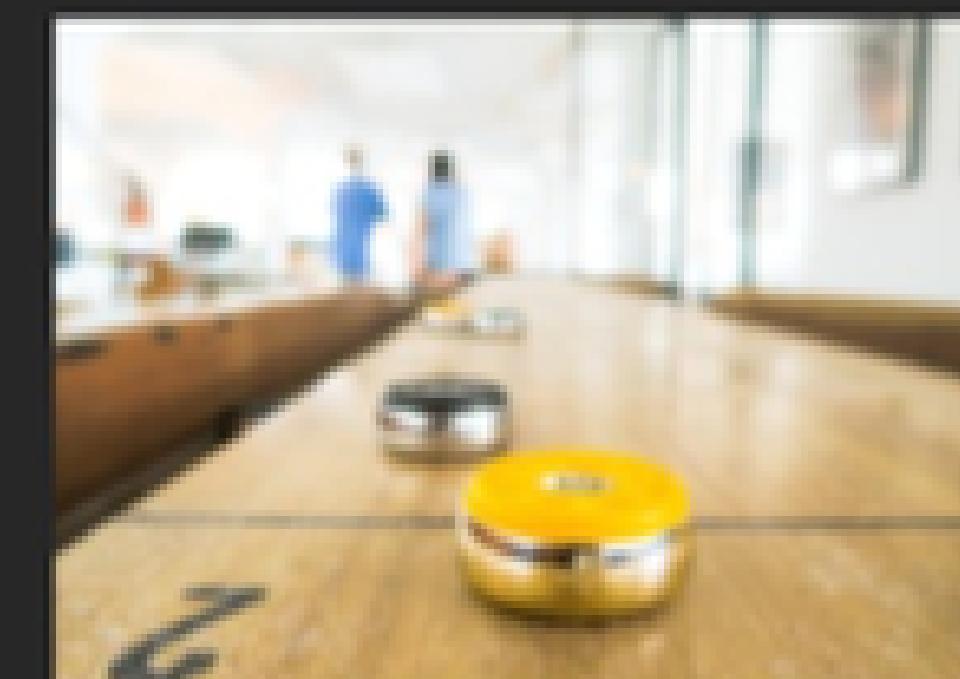
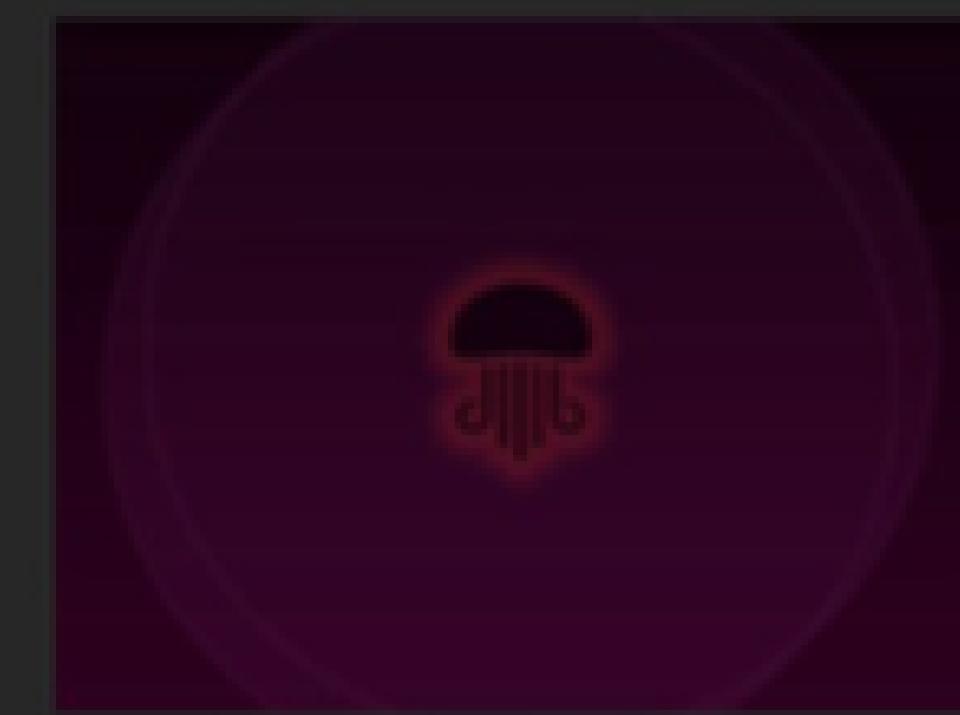
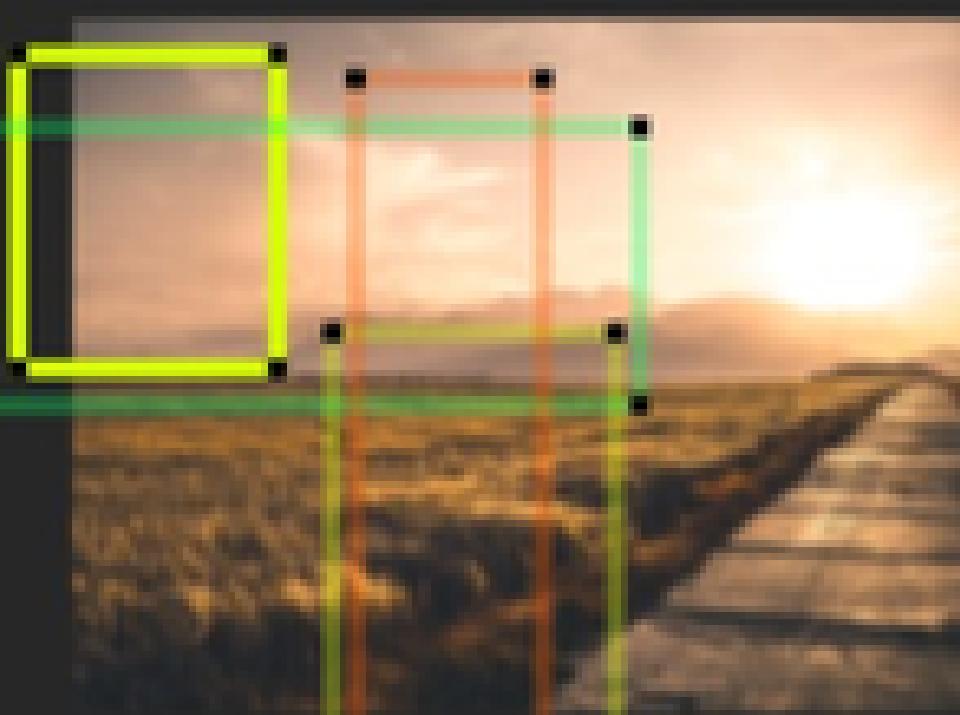
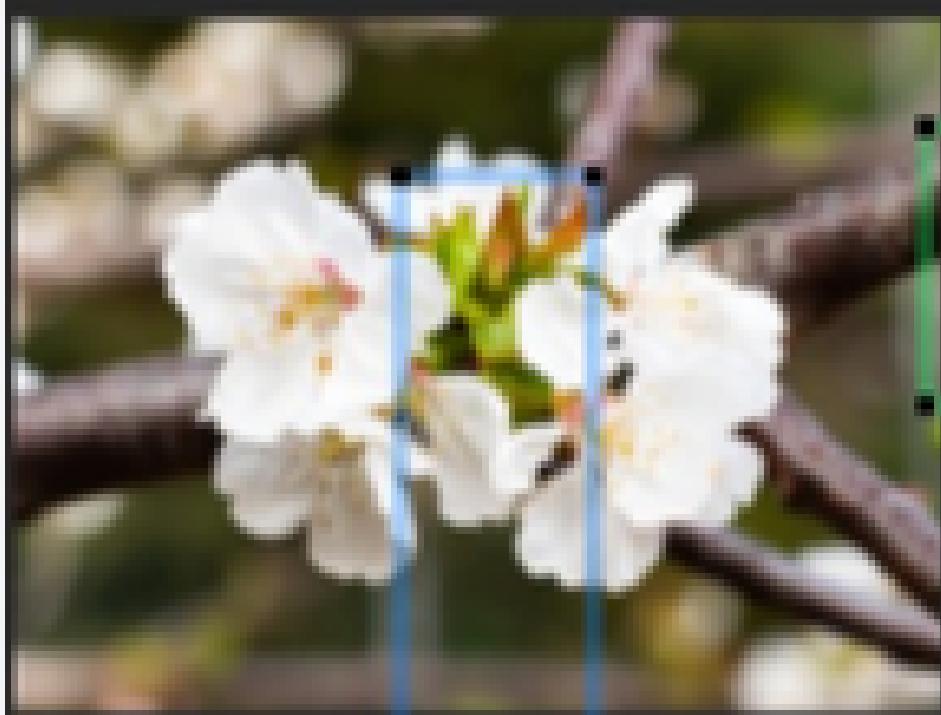
Dashboard

Hi Amey



CONFFLICT RESOLUTION WORKFLOW



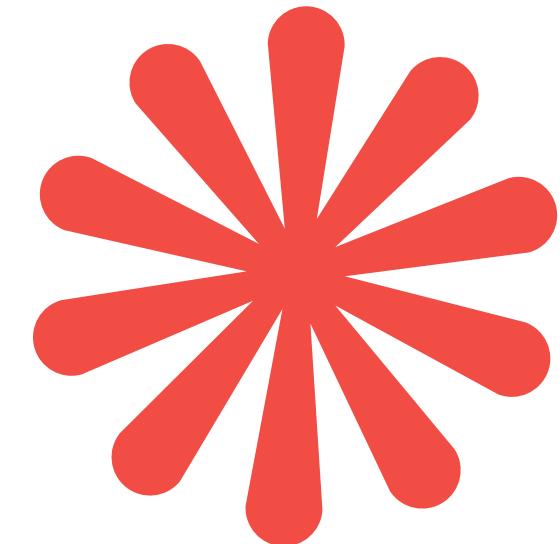


yellow

No Comment for the
given Region

INTEGRATION

TEAM WAKENBAKE



INTEGRATED ADVANCED FEATURES INTO THE EXISTING DATA FOUNDATION SYSTEM, ENHANCING THE ANNOTATION TOOLBOX WITH CAPABILITIES LIKE CIRCLE AND OVAL BOUNDING BOXES, IMPROVED LABELING, PERSISTENT ANNOTATIONS, AND A 'FILL INSIDE' OPTION.

TEAM KALKI2898AD

INTEGRATED COMMENT SECTION FOR LABELS INTO THE EXISTING DATA FOUNDATION SYSTEM

CODE QUALITY

- MODULARIZATION
- READABILITY
- DOCSTRINGS

```
const handleLoad = (
  image,
  width,
  height,
  setScale,
  setImageSize,
) => [
  /**
   * Handles the loading of an image, calculates its scaled dimensions based on the provided width and height constraints,
   * and updates the state with the new scale and image size.
   *
   * @function
   * @param {object} image - The image object to be loaded.
   * @param {number} width - The maximum width constraint for the image.
   * @param {number} height - The maximum height constraint for the image.
   * @param {function} setScale - A function to set the scale state.
   * @param {function} setImageSize - A function to set the image size state.
   * @param {function} setSize - A function to set the size state.
   * @returns {void}
   */
  if (!image) {
    return;
  }

  let temp_scale = 1;
  let ratio = 1;
  let scaledWidth = 0;
  let scaledHeight = 0;
```



CHALLENGES FACED

- 01 Complexity of the extensive Codebase**
- 02 Fixing bugs in the previously implemented features of the codebase**
- 03 Managing Compatibility issues with pre-existing codebase**
- 04 Lack of Documentation**
- 05 Integration and Backend Development**

THANK YOU