

Getting started with CV Studio

CV Studio is a Computer Vision learning tool made for you which makes building your Computer Vision application fun and interactive. CV Studio can be accessed through this [link](#) or if you are accessing this doc through our course, you can find the link in the lab section of your course. We are continuing to expand our learning modules and we currently have applications for Image Classification and Object Detection

Each of the learning modules are standalone with instructions and resources about each algorithm. To build, train and deploy your Computer Vision model, here are some quick simple steps:

1. Start a New Project:

After logging into [CV Studio](#), you can create a New Project. You will see a box like this. Choose a Name, the Type has been chosen for you based on the algorithm you will be using.

Create a new project

In this lab, you will use K-Nearest-Neighbor (K-NN) to classify dogs and cats.

Name

Training_an_image_classifier_with_KNN

Type

Classification

Training Runs

Notebook
k-nearest neighbors algorithm (k-NN)

Applications

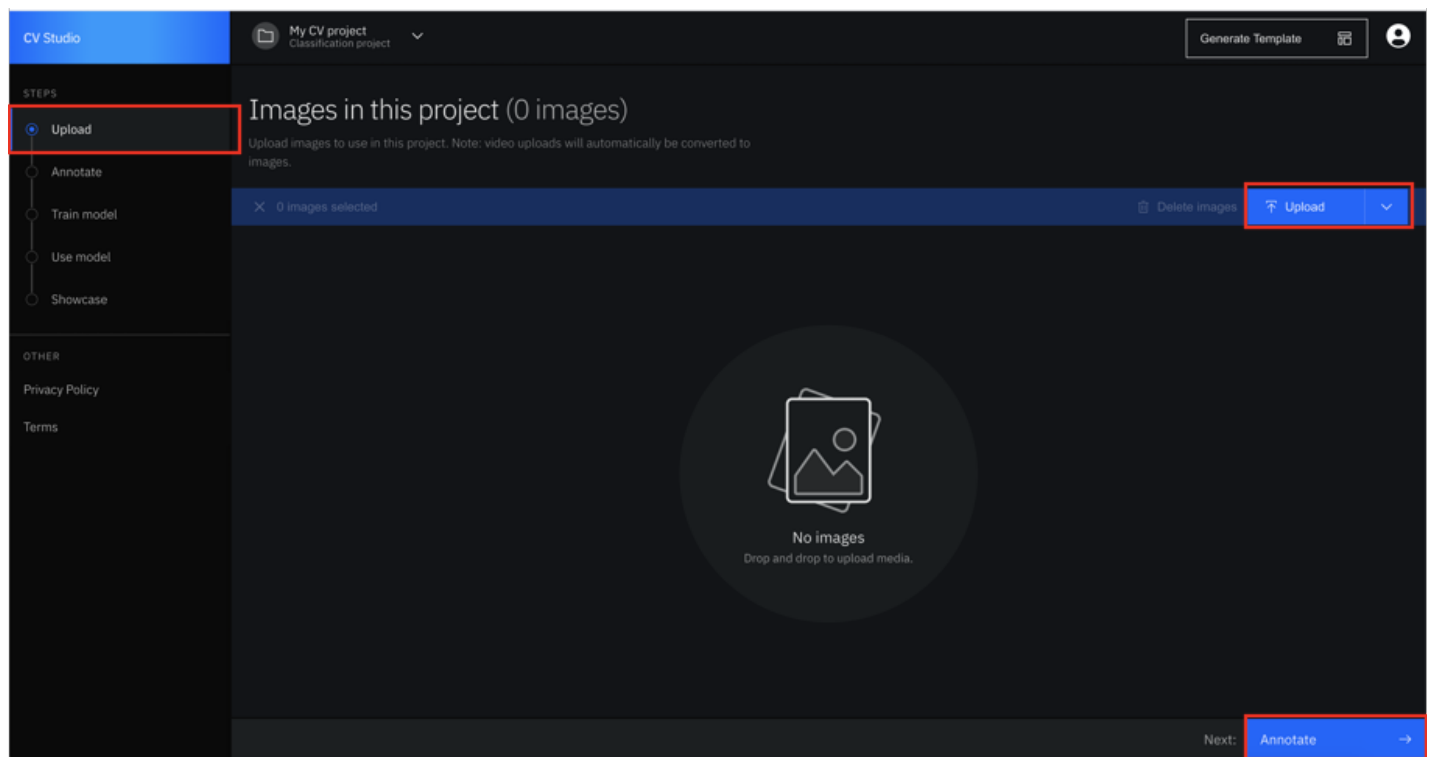
Notebook
k-nearest neighbors algorithm (k-NN)

+ Advanced settings

Cancel Create project

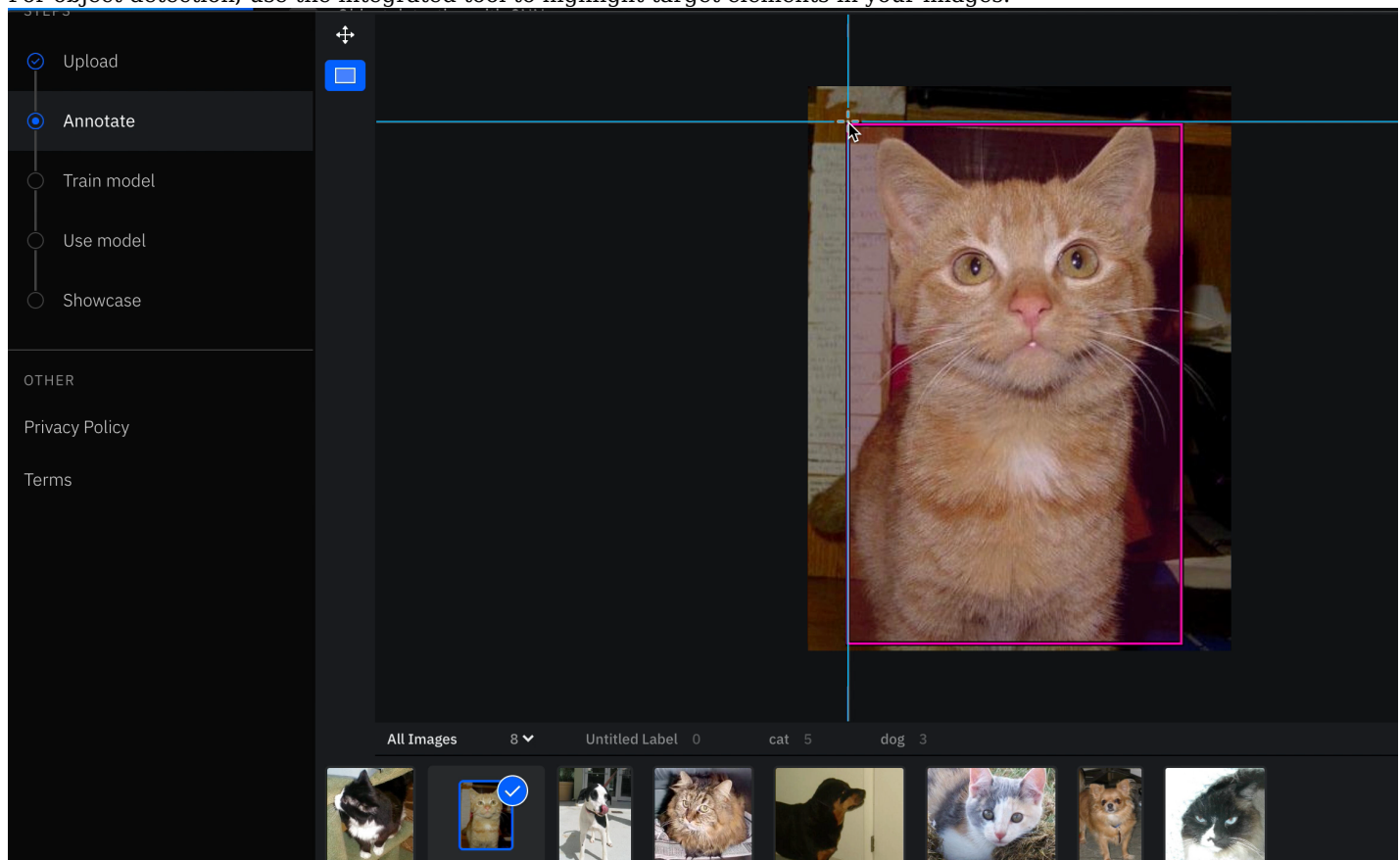
2. Upload Images:

Once you create your project you will land on the upload page. Here you will upload your images for training, you can do this by using the upload button at the right or dragging and dropping your files or folders. The current accepted formats are .jpg, .png, and .zip files and folders containing jpg and png files.

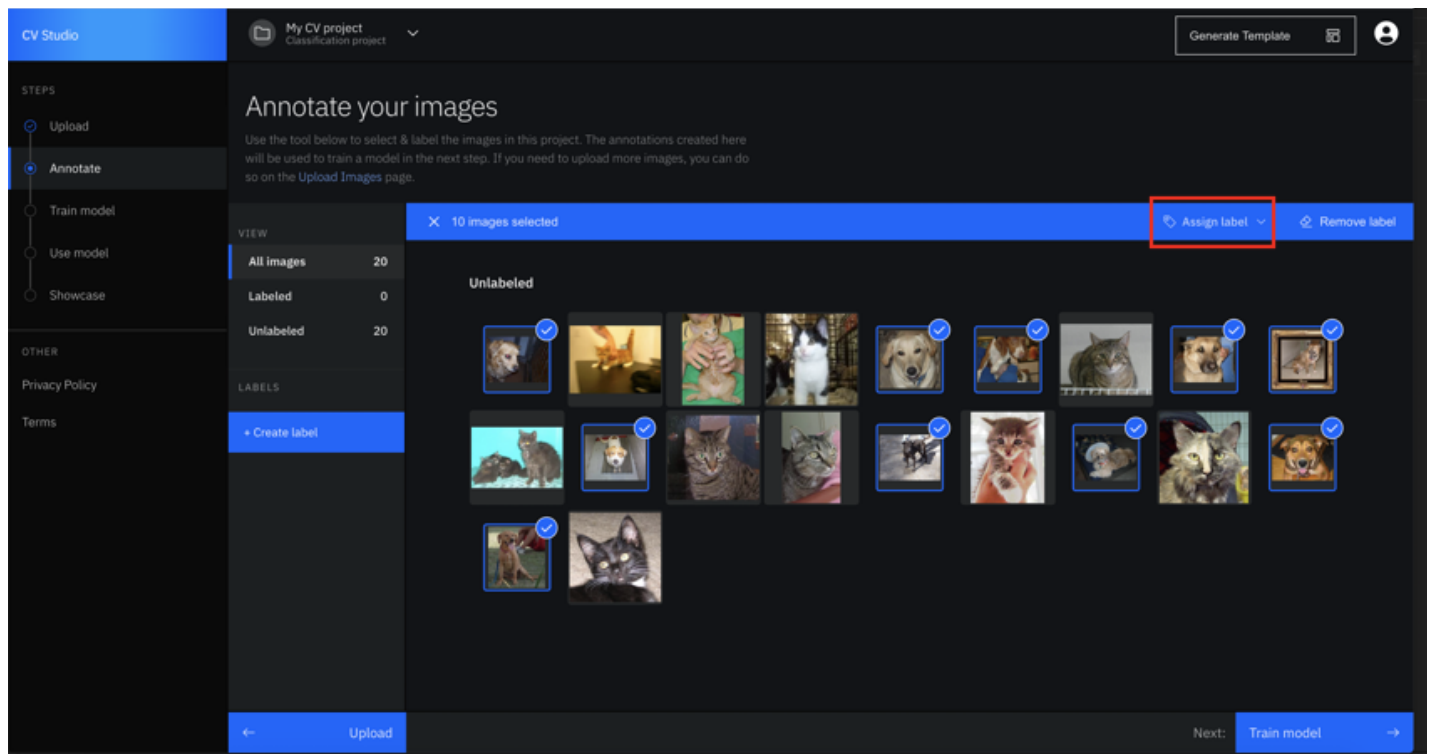


3. Annotate your images:

For object detection, use the integrated tool to highlight target elements in your images.



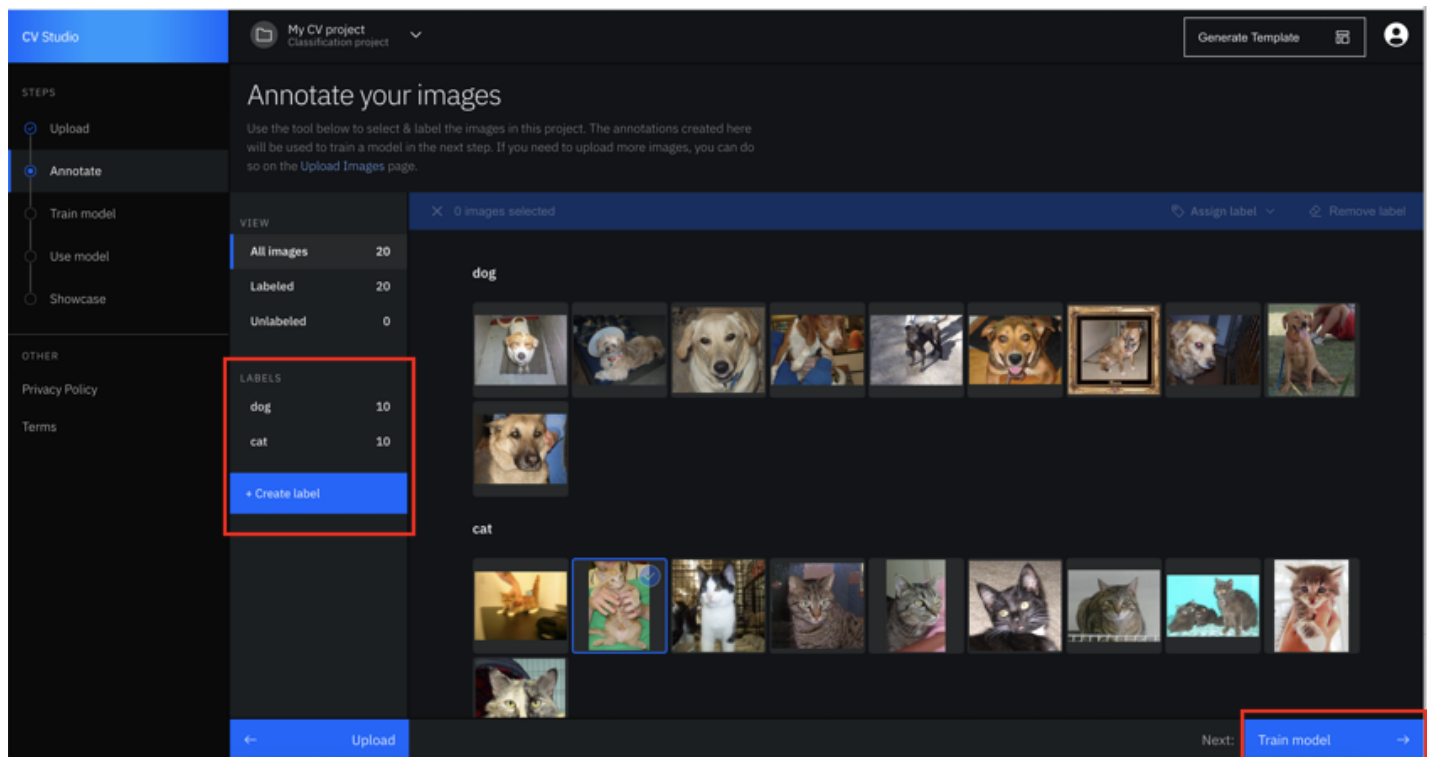
For image classification, you can annotate within the tool by clicking on the images and adding them to a label. You can add them to a new label or a label you already created.



If you name your folder with the respective classes, the annotation will happen automatically when you upload your images.

Name	Date Modified	Size	Kind
cat	Today at 8:29 PM	--	Folder
dog	Today at 8:27 PM	--	Folder

We will see the classes cat and dog.

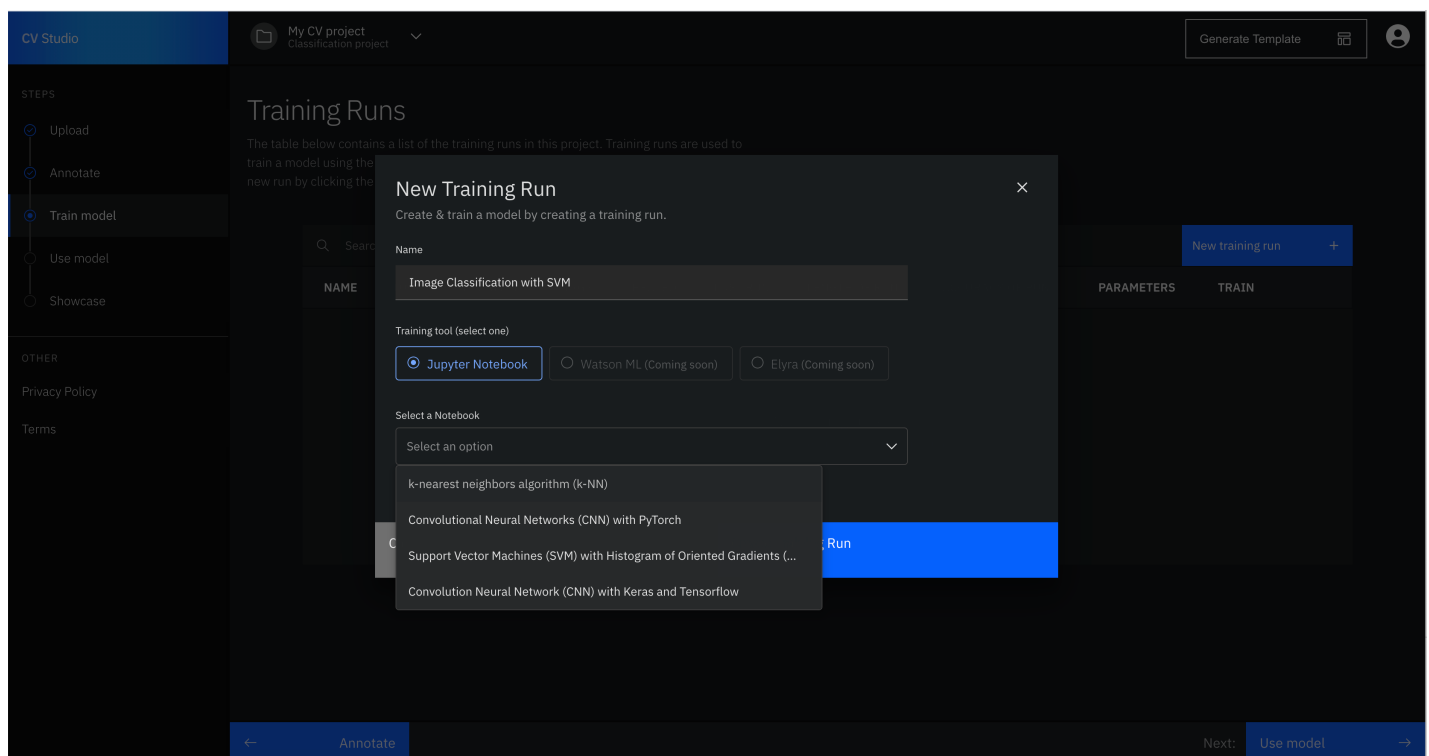


Next we go to Train Model on the bottom right.

4. Train Model:

You will be able to train your model using the image annotations from the previous step.

You will be required to enter a name, pick a tool and select the training algorithm.



Once you fill this in, you can now open the tool and run your model. Once the model is done running, you will come back to this interface and create an application.

CV Studio My CV project Classification project Generate Template Profile

STEPS

- Upload
- Annotate
- Train model**
- Use model
- Showcase

OTHER

- Privacy Policy
- Terms

Training Runs

The table below contains a list of the training runs in this project. Training runs are used to train a model using the images & annotations you created in the previous steps. Create a new run by clicking the **New training run** button.

NAME	TOOL	ALGORITHM	TAGS	CREATED	LAST RUN	LENGTH OF RUN	ACCURACY OF RUN	PARAMETERS	TRAIN
Image Classification with SVM	Notebook	Support Vector Machines (SVM) with Histogram of Oriented Gradients (HOG)	SVM HOG MSRCNN	25-Apr-2021	Never	NA	NA	C: 10 kernel: linear	Open Notebook Share Refresh Delete

← Annotate Next: Use model →

5. Use Model:

You will come back into this interface and create a New Application to test the model.

- Choose a name for your application,
- Choose a Model
- Choose the appropriate Training Run

Applications

The table below contains a list of applications in this project. Applications are how you test your model in CV Studio. When you click on an application, it will take you to the application's details page.

NAME	CREATED	USE
Test my Classification model	16-Apr-2021	Launch Notebook Share Delete

New Application

Create an application to put a model to use.

Name:

Model (select one): ☒ Models in this project ☐ Public model in CV Studio

Extract model from training run: ▼

Cancel Create Application

Once you are done, you will now launch a tool to test the app.

CV Studio Image Classification with SVM Classification project [Generate Template](#)

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Applications

The table below contains a list of applications in this project. Applications are how you test models in CV Studio. When creating a new application, you can choose to use a model from a training run in this project or from a public source.

Search [New Application](#) +

NAME	STATUS	TOOL	TRAINING RUN	TAGS	URL	CREATED	USE
Use SVM image classifier	READY	Notebook Support Vector Machines (SVM) with Histogram of Oriented Gradients (HOG)	Train SVM image classifier	OpenCV HOG SVM	NA	16-Apr-2021	Launch Notebook

[←](#) Train model Next: [Showcase](#) [→](#)

6. Showcase your app:

If you are using a learning module that supports deployment to the web, you will be able to click on the showcase tab to deploy your web app to code engine.

Date (YYYY-MM-DD)	Version	Changed by	Change Description
2023-05-04	0.3	Eric Hao	Updated the page frame
2021-06-07	0.2	Aije Egwaikhide	Changed image to match new CV Studio interface
2021-04-25	0.1	Aije Egwaikhide	Created original version