



Instructions for training model

Step 1

Log in or sign up

Login

 Username


 Password


Sign In

Don't an account? [Sign Up here.](#)

Step 2


Select “Train a Model”

 Image Classification Portal

Welcome, user0! 

Please select an action

You can either select to train or predict




Train a Model

Please select this option if you want to train a model for making predictions

click →

Start Right Now




Make a prediction

Please select this option if you want to make a predictions

Start Right Now

Step 3

Select a base model type and got to “Next”

 Image Classification Portal Welcome, user0!

Choose model

Select data

Customize inputs

Name+train

Complete

1. Choose a model type

Select a model type below.

[read more about model types](#)

you selected model: VGG16

VGG16

Deep Convolutional Networks for Large-Scale Image Recognition

other CNN


multi-layer neural networks to recognize visual patterns directly from pixel images with minimal preprocessing

Cancel

Next

Step 4

Select an existing project.
Or create a project

 Image Classification Portal Welcome, user0!

Choose model

Select data

Customize inputs

Name+train

Complete

2. Upload files

1. Name a new project or select a project*

You've selected project: frog_embryo. ([view trained models of this project](#))

[cat-dog-panda](#)

[crop_embryo](#)

[frog_embryo](#)

project name

create project

2. Add category*

category name

Add

Training data:

[control](#)

[mutant](#)

Testing data:

[control](#)

[mutant](#)

3. Select a folder above and upload file(s) to it*


Prev

Next

Step 5

Add categories in the project you selected, e.g. controls, mutants.

Note: the category is created in both "Training data" and "Testing data" once you click "Add".

 Image Classification Portal Welcome, user0!

Choose model

Select data

Customize inputs

Name+train

Complete

2. Upload files

1. Name a new project or select a project*

You've selected project: new-project. ([view trained models of this project](#))

[cat-dog-panda](#) [crop_embryo](#) [frog_embryo](#)

[new-project](#)

create project

2. Add category*

Add

Training data:

Testing data:

3. Select a folder above and upload file(s) to it*

Prev

Next

Step 6

Select each folder from training data or testing data and upload images

2. Add category*

Add

Training data:

Testing data:

1 →

[controls](#) [mutants](#)

[controls](#) [mutants](#)

3. Select a folder above and upload file(s) to it*

You selected **/datasets/controls** (currently 0 images in it).

2 →

40 files

3 ↑

upload files



Prev

Next

Step 7 (optional)

Read about hyperparameters with the link provided.

Set your own parameters, click submit and click next.

 Image Classification PortalWelcome, user0!

Choose model

Select data

Customize inputs

Name+train

Complete

3. Customize model inputs (optional)

Set model inputs below (optional)

[what are these hyperparameters?](#)

If you're training the model for the first time, you can skip to next step

epoch: (at least 20 epochs)

train_batch_size: (optional)

validation_batch_size: (optional)



[advanced inputs](#)

Submit

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Step 8

Type a name for your model and click “submit and train your model”.

 Image Classification PortalWelcome, user0!

Choose model

Select data

Customize inputs

Name+train

Complete

4. Name and train your model

Name and train your model


Name your model (must not contain space)


Submit and train your model

Prev

Step 9

Wait for the model to complete training. This could take a while depending on your data size and number of epochs.

 **Image Classification Portal**

Welcome, user0! 

Choose model

Select data

Customize inputs


Name+train


Complete


Your model "crop_embryo" is submitted for training.


You will receive an email to tyin1@mail.sfsu.edu with the details of your model once the training is complete. This could take a while.


You'll receive an email with training results. Click the link to view details.


 **Compose**










 **Inbox** 391

 Starred


 Snoozed

 Important

 Chats

your model "crop_embryo" is complete

 **dlimageclassification@gmail.com**
to tyin1 ▾

Your model "crop_embryo" is trained at 2020-03-10-11:36:07;
[Click here to view details about this model](#)

Step 10

View training results and decide your next action.

Image Classification Portal

Welcome, user0!

Choose model

Select data

Customize inputs

Name+train

Complete

Your model `crop_embryo.h5` is successfully trained.

Confusion Matrix

	control	mutant
control	82	5
mutant	5	137

True Label

Predicted label

Test accuracy = 0.956
(Click on a cell in the matrix to view image(s) that are predicted differently from their label, or [view test data as experiment](#))

If you are not satisfied with this model, you can [restart training](#) or [view all trained models of this project](#)

Model details:

- selected base model: VGG16
- training data size: 500
- epoch: 20

train and validation accuracy

epoch

accuracy

val_accuracy

possible ways to improve your model:

Add more data
Your training data size is 500, which is not a significant amount. Try increasing your sample by providing new data, which could translate into new cases or new features.
[Read more about data tactics](#)

Clean Your Data
Can you improve the signal in your data? Perhaps there are missing or corrupt observations that can be fixed or removed, or outlier values outside of reasonable ranges that can be fixed or removed in order to lift the quality of your data.
[Read more about data quality, scope and quantity](#)

Select features and examples
If estimate variance is high and your algorithm is relying on many features, you need to prune some features for better results by picking those with the highest predictive value is advisable.

Hyperparameter Tuning
Finding the best hyper-parameters is usually done manually. It's a simple task of trial and error, with some intelligent guesstimating. You'll simply try as many hyperparameter settings as you have time for, and see which one gives you the best results.
If you model's learning curve does not plateau, try add more epochs to your next training.
[Read more about hyperparameters](#)
You may also experiment with the size of your batches and the number of training epochs. [Read more about Hyperparameter Optimization](#)

Discard model

Rename model

Mark as favorite