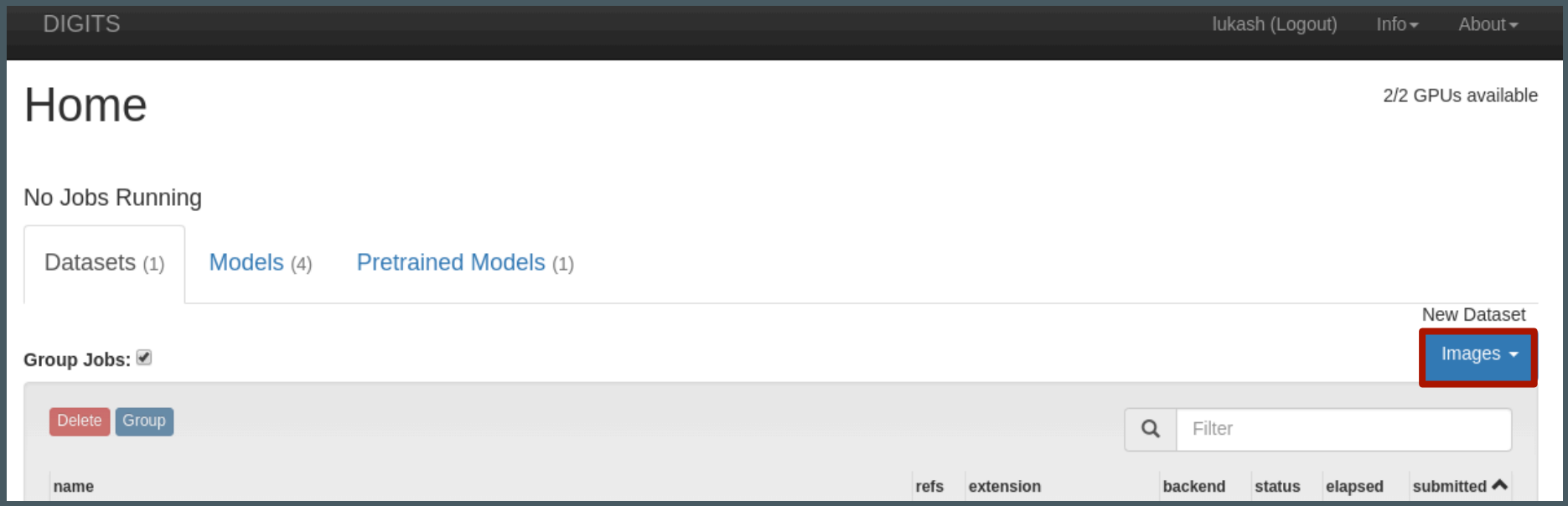
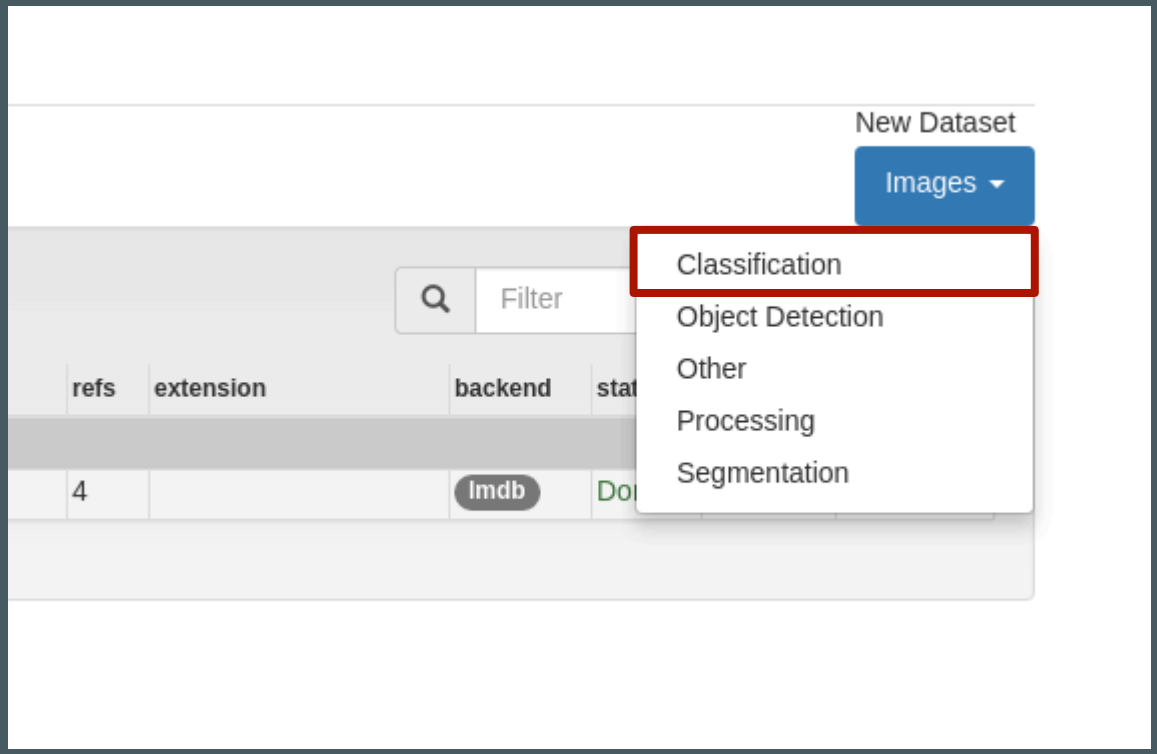
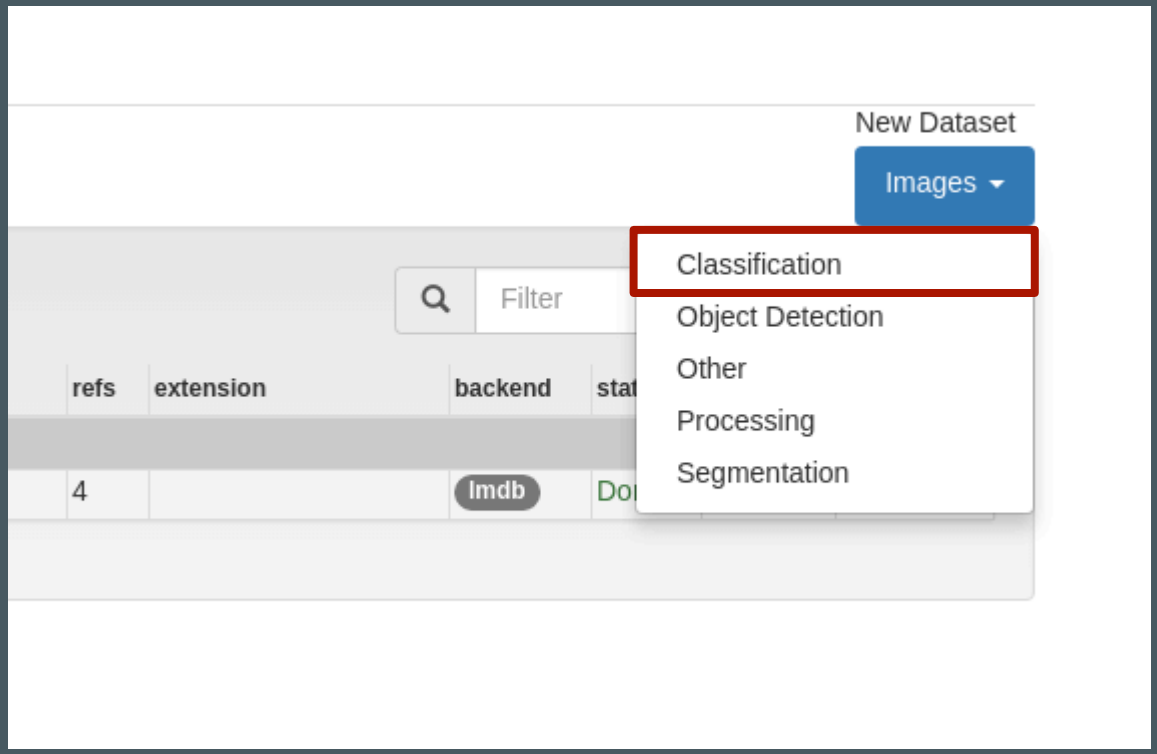
Add a new dataset



Add a new dataset



Add a new dataset



Add a new dataset

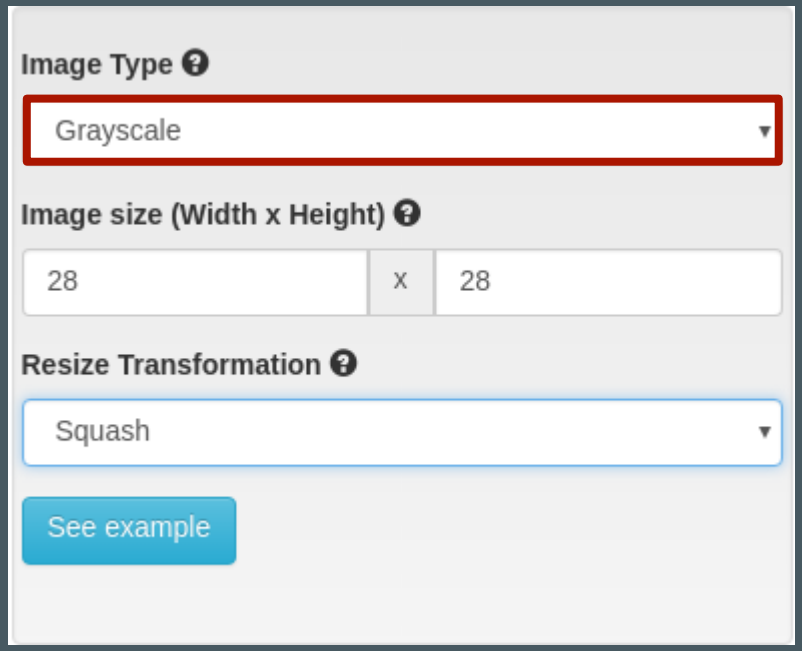


Image Type:

- Grayscale : 1 channel
- Color : 3 channels (RGB)

Add a new dataset

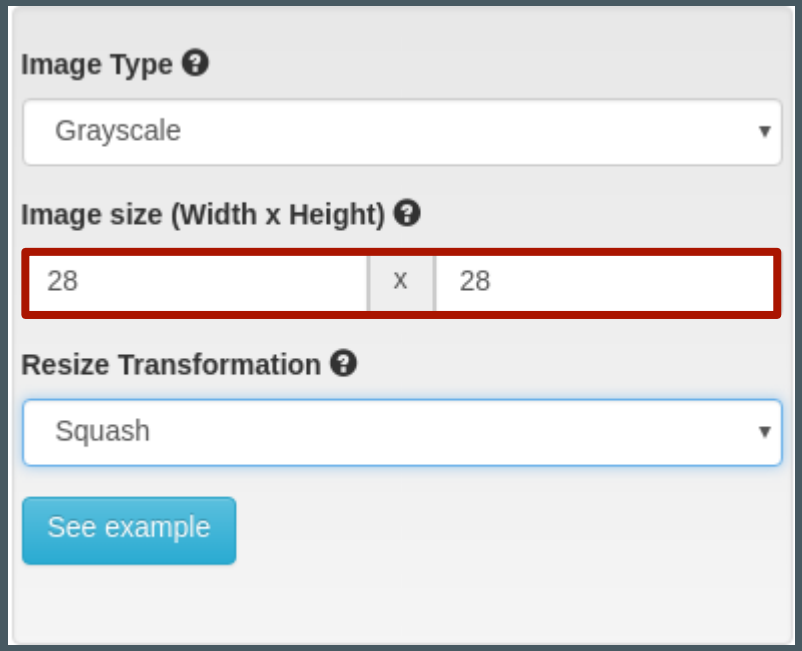
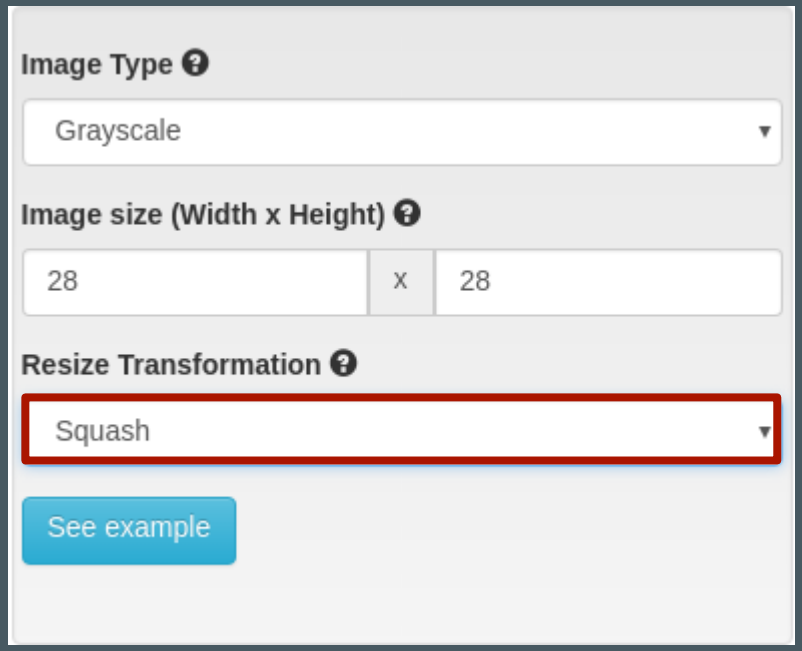


Image Size:

- Since it is MNIST dataset, we set the image size to 28x28

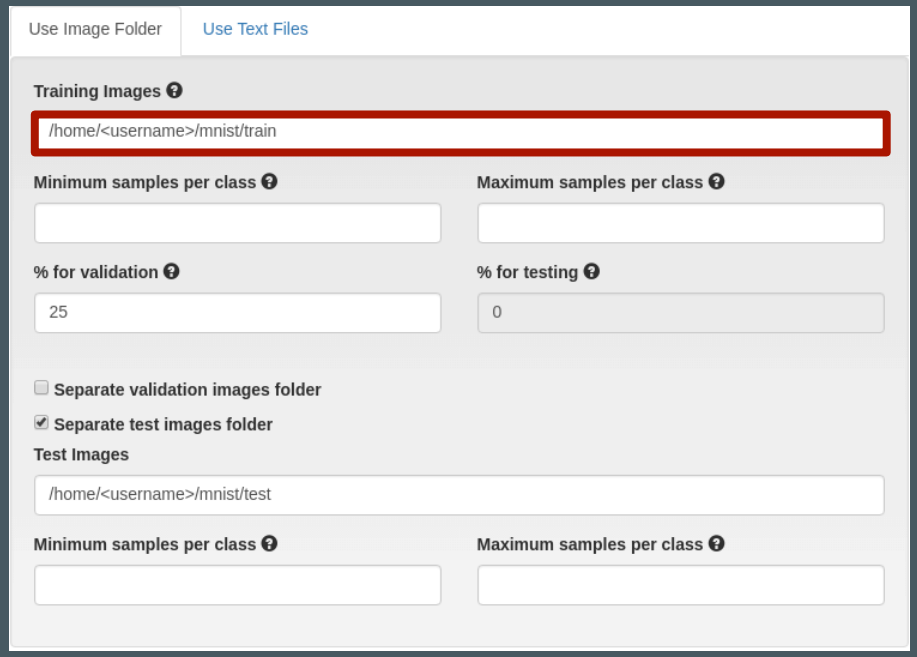
Add a new dataset



Resize Transformation

- Crop : traditional crop
- Squash : traditional squash
- Fill : keep the original ratio by filling the gap with a color
- Half crop, half fill : combination of crop and fill

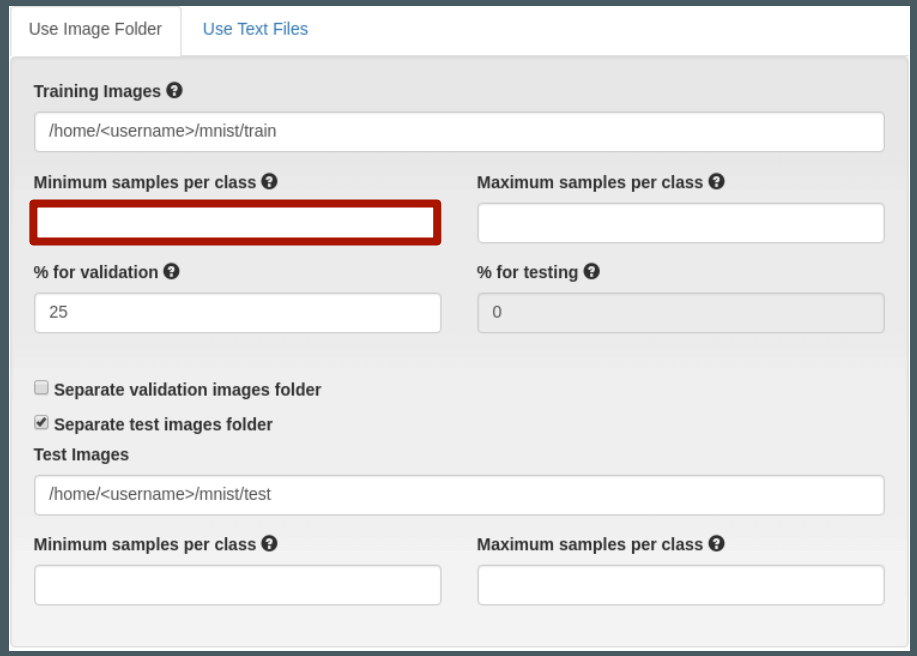
Add a new dataset



Training Images:

- Train directory containing samples per class, "labels.txt" and "train.txt"

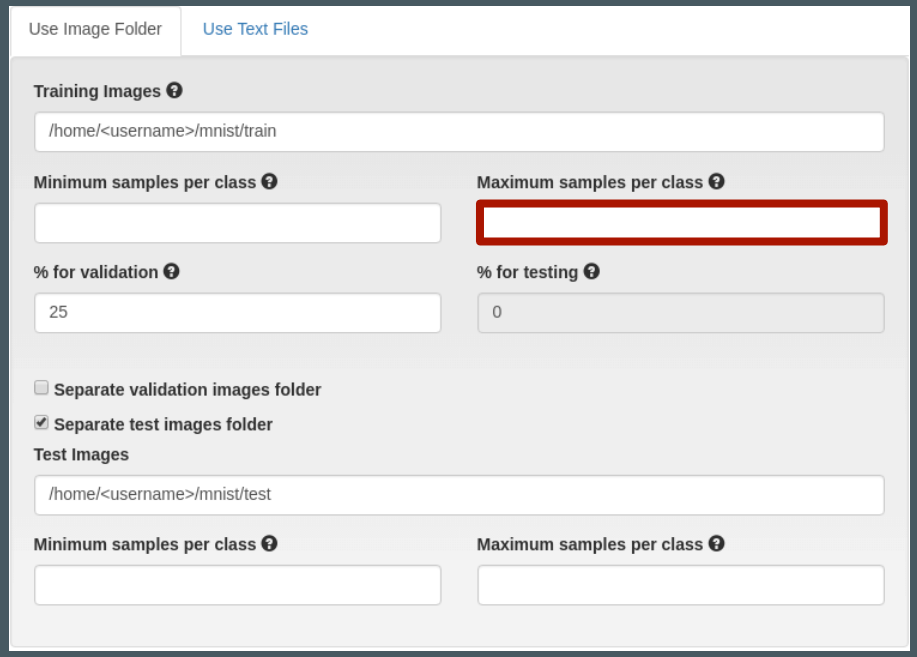
Add a new dataset



Minimum sample per class

- Ignore the class sample if the number of samples is **less** than the specified number
- Blank means ignore this feature

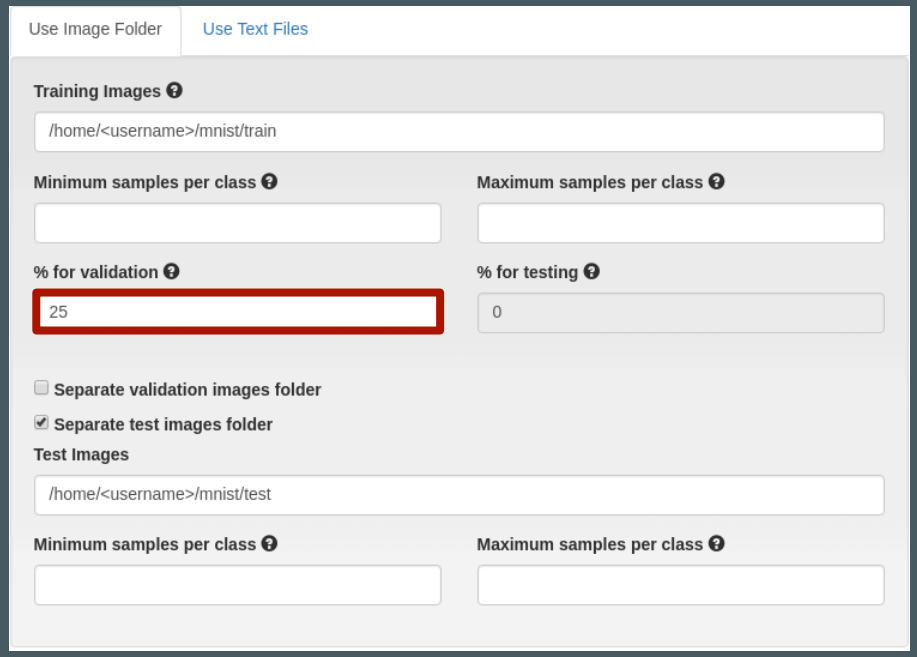
Add a new dataset



Maximum sample per class

- Ignore the class sample if the number of samples is **greater** than the specified number
- Blank means ignore this feature

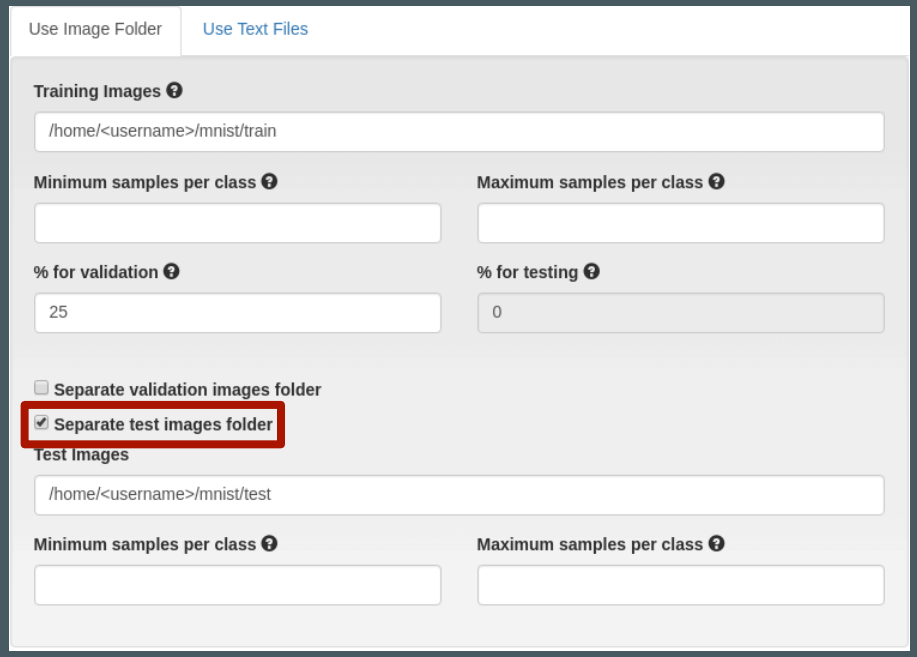
Add a new dataset



% for validation

- Proportion of the dataset for validation

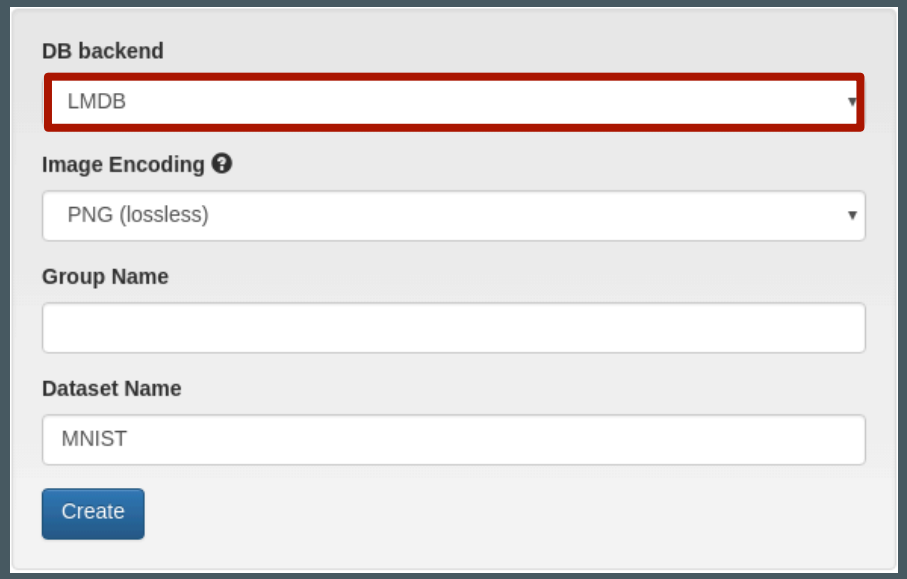
Add a new dataset



Separate test images folder

- Since the downloaded MNIST dataset has the test images separated, this option has to be checked

Add a new dataset



DB backend

- LMDB : Great **performance**, but not good for large dataset
- HDF5 : Great for **large dataset**, but not good in term of performance

Add a new dataset

Image Encoding (Reduce image sizes)

- None : Raw image
- PNG : 100% quality with less file size
- JPEG : 90% quality with file size less than PNG

Add a new dataset

Group Name (optional)

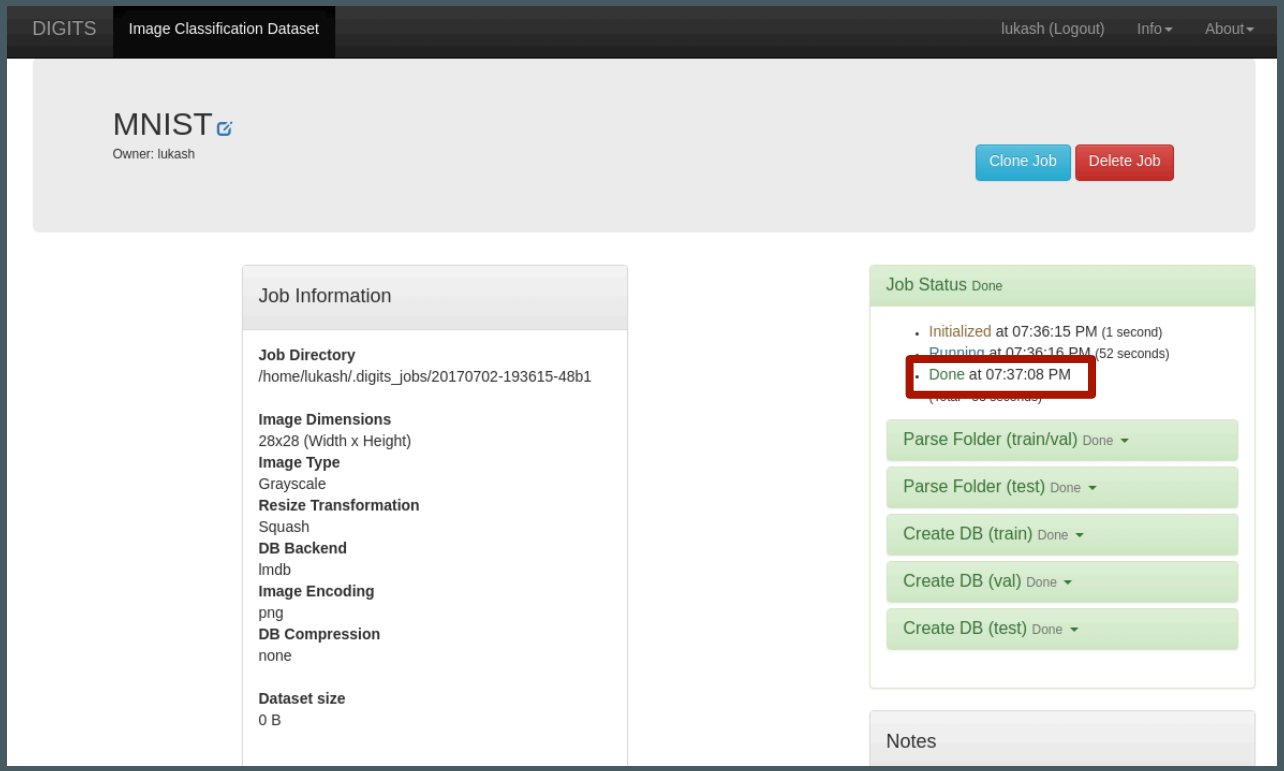
- This is just a reference name to group a bunch of datasets

Add a new dataset

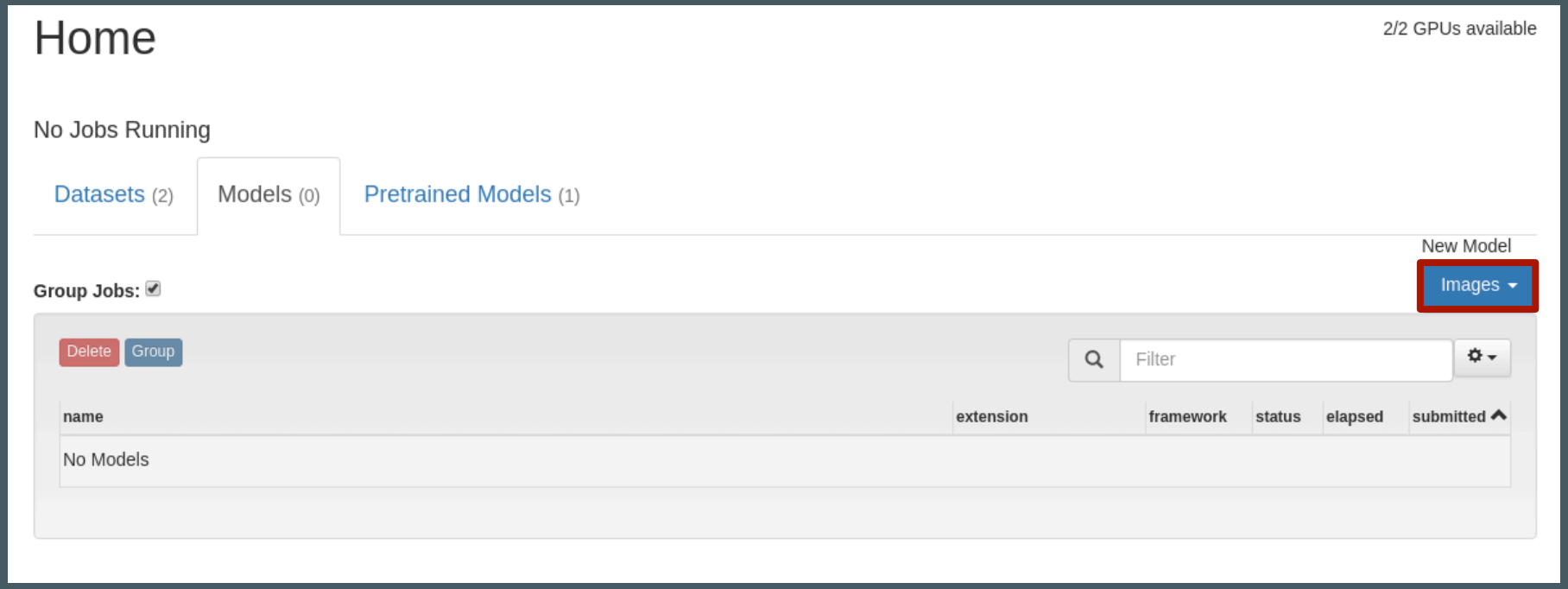
Dataset Name (required)

- This is just a reference name to be called in importing a dataset

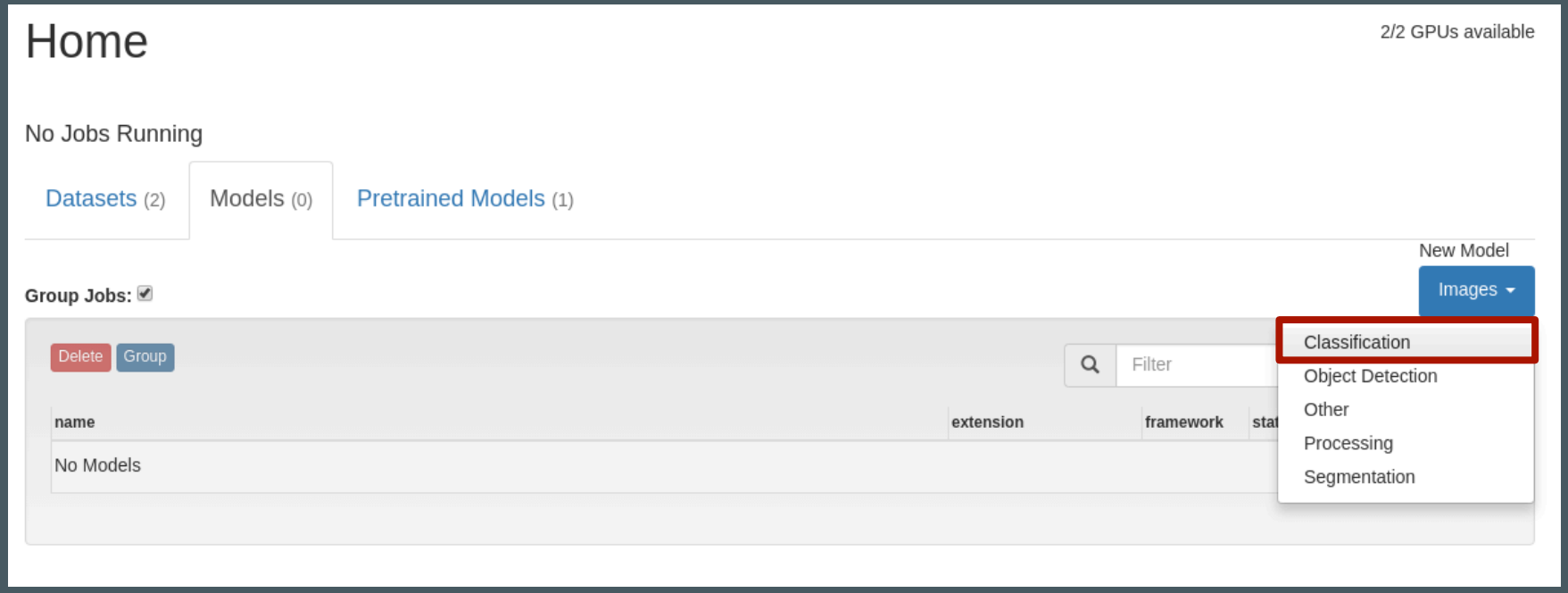
Add a new dataset



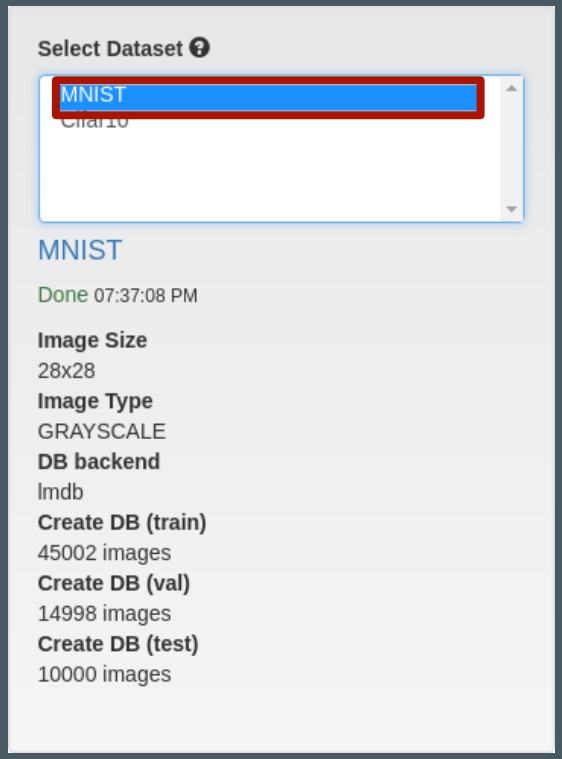
Add a new model



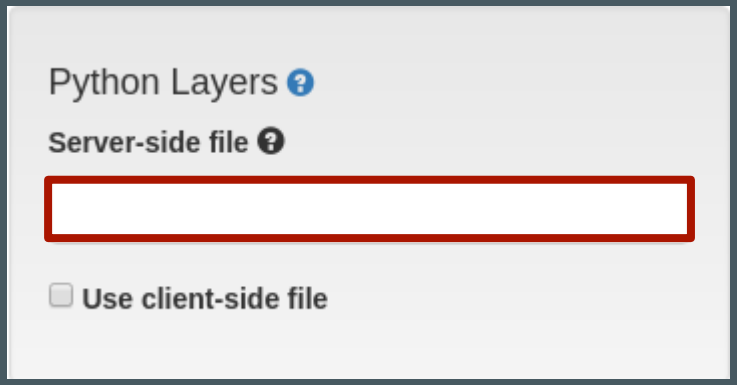
Add a new model



Add a new model



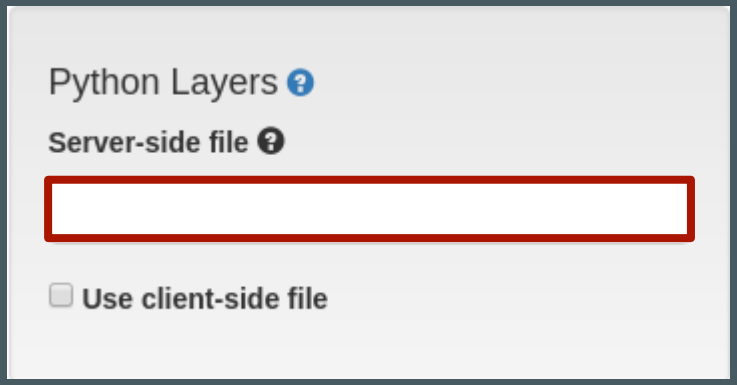
Add a new model



Python Layers

- DIGITS support custom python layer using "Caffe"
- For now, leave it blank to keep things simple

Add a new model



Python Layers

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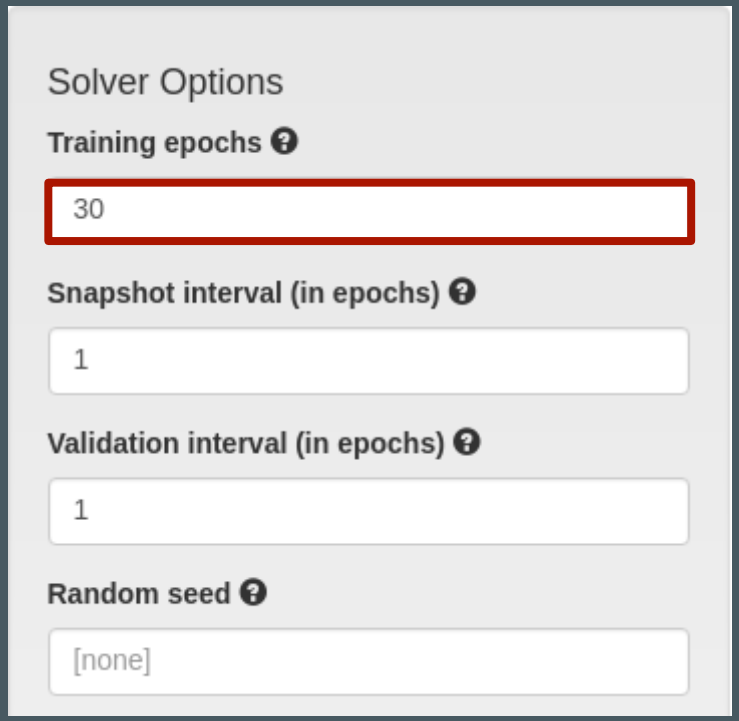
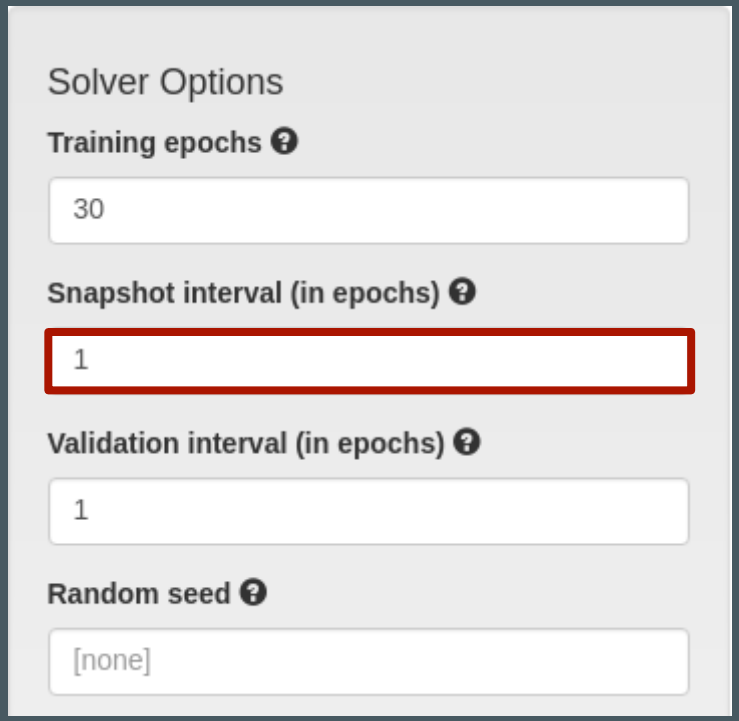
Add a new model



Training epochs

- How many passes through the training dataa

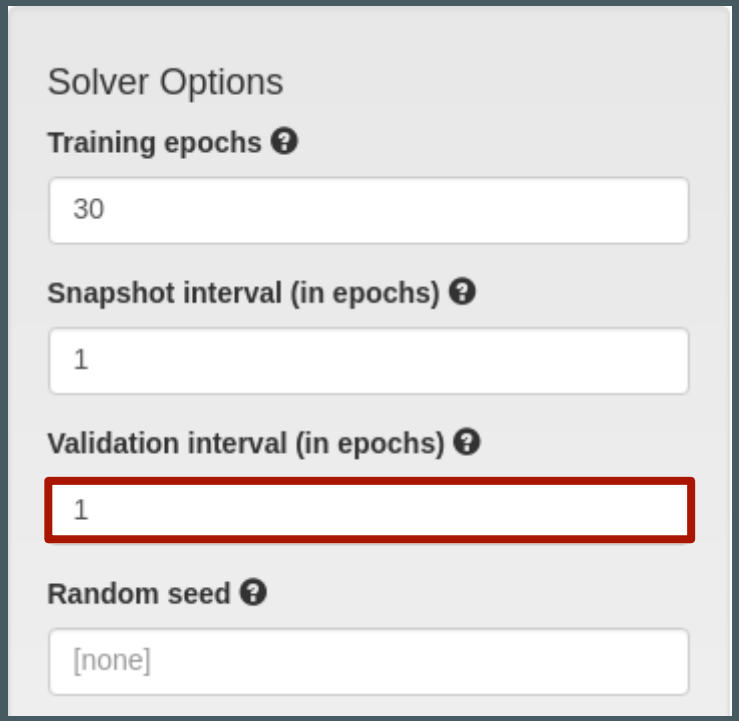
Add a new model



Snapshot interval

- How frequent the model takes snapshots

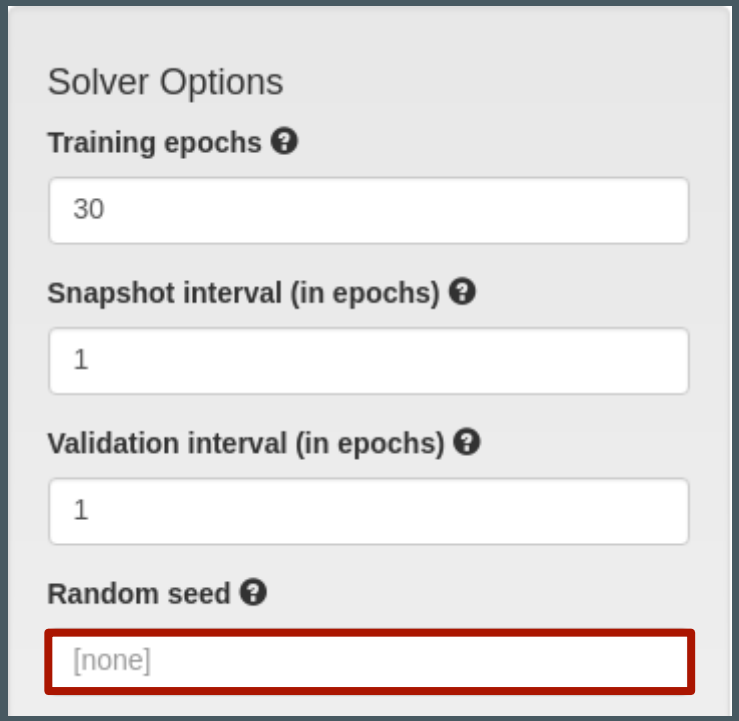
Add a new model



Validation interval

- How frequent the model calculates the accuracy

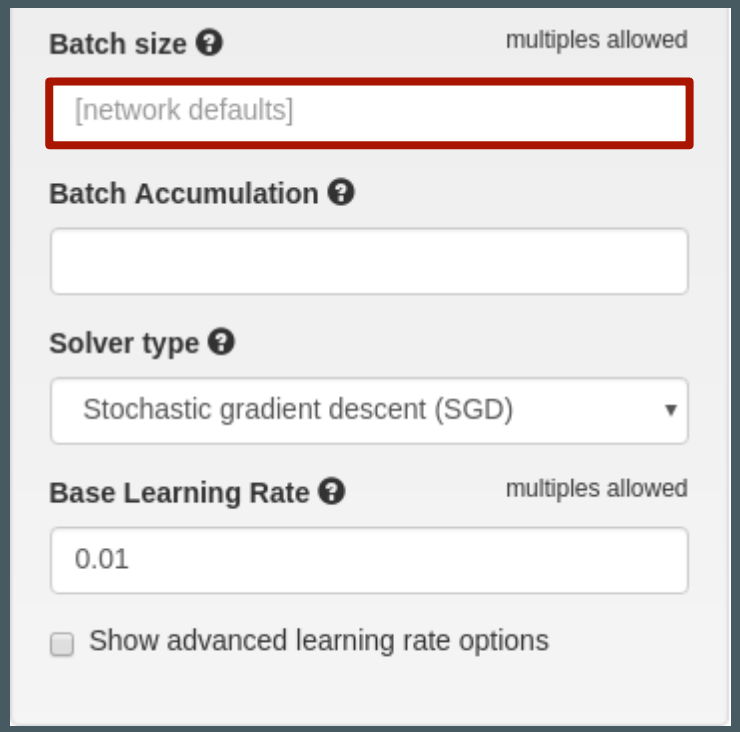
Add a new model



Random Seed

- Determine the randomness of the dataset
- blank : the dataset will mostly different for the next training step
- any-number : the dataset will be

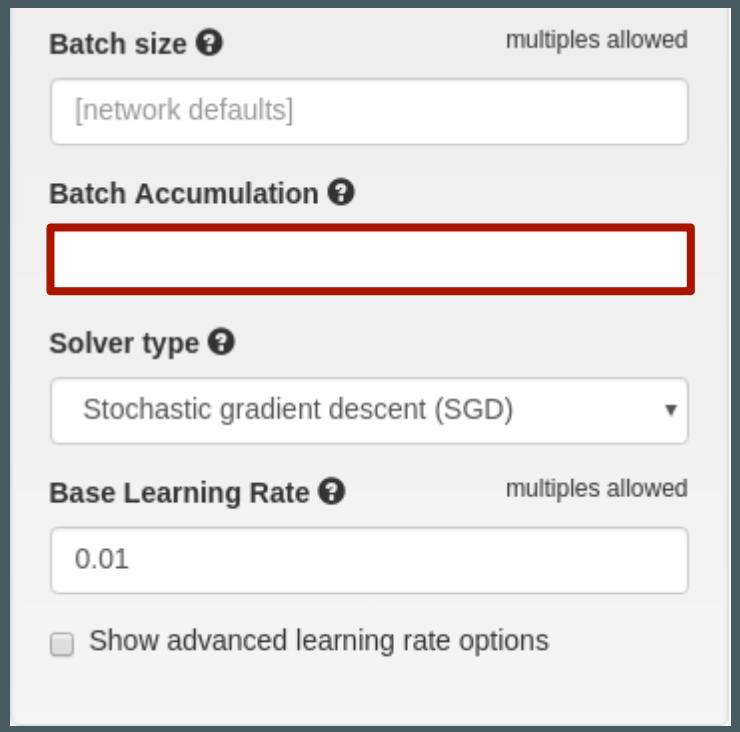
Add a new model



Batch size

- How many images to process at once
- blank : use the network configuration

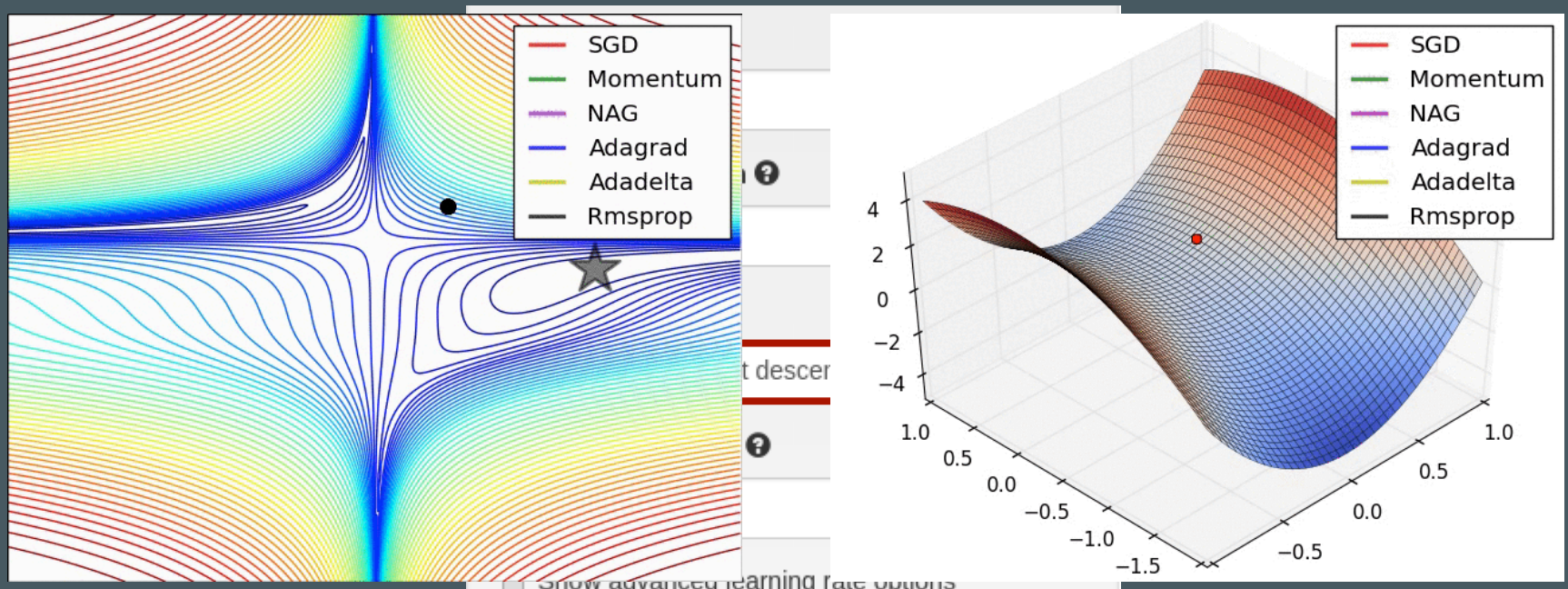
Add a new model



Batch Accumulation

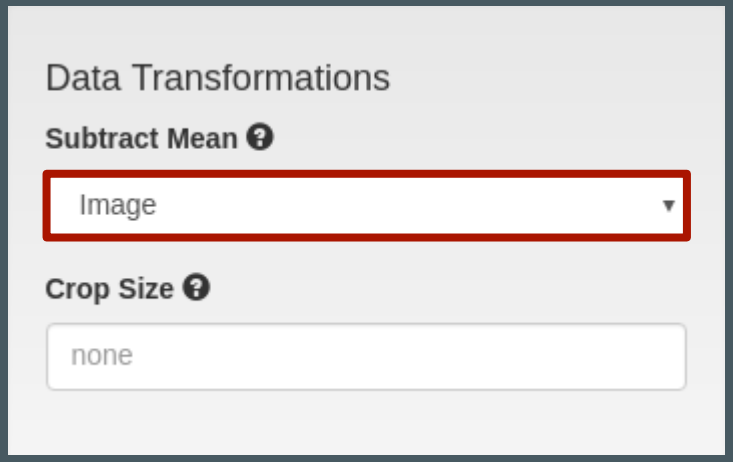
- How frequent the model calls the solver to readjust the variables

Add a new model



Reference: http://sebastianruder.com/content/images/2016/09/saddle_point_evaluation_optimizers.gif

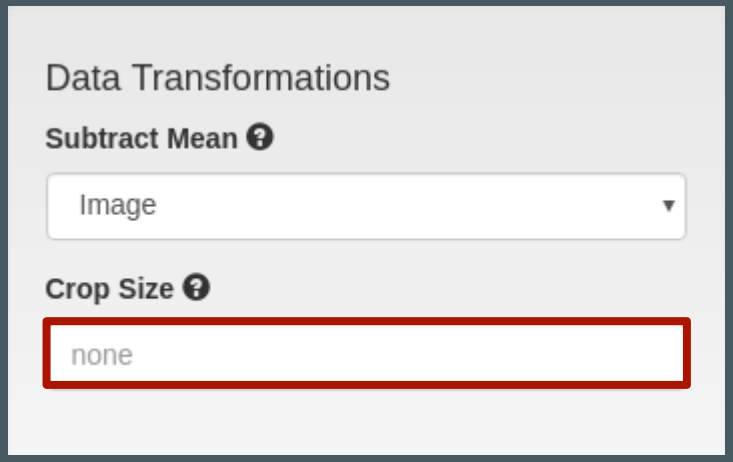
Add a new model



Subtract Mean

- Image : subtracted from any input image you feed to the neural network
- Pixel : subtract the "same" mean pixel value from all pixels of the input to the neural network

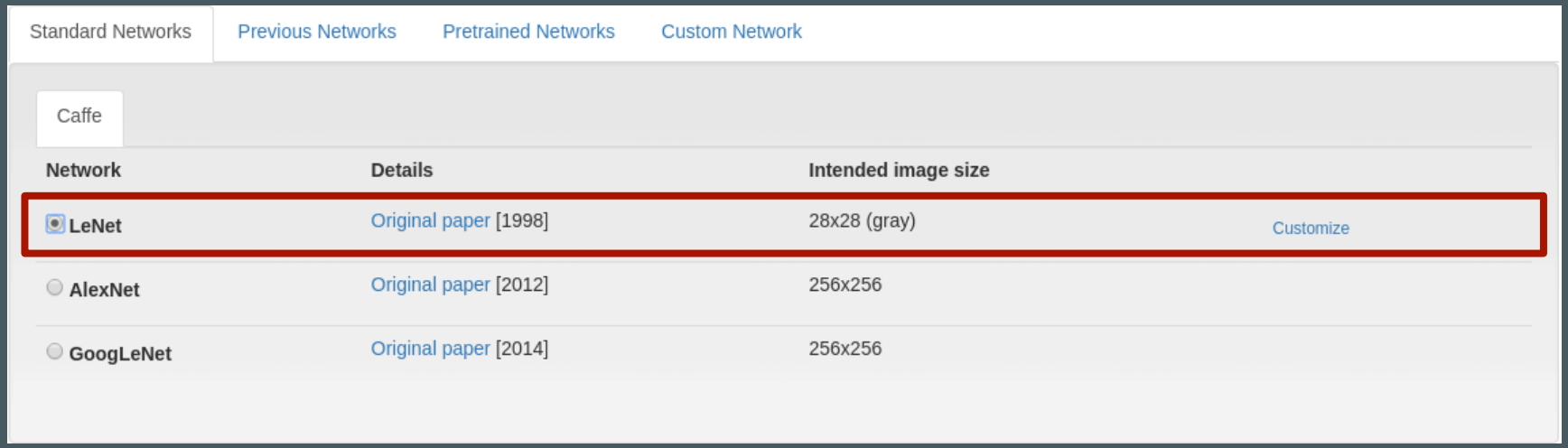
Add a new model



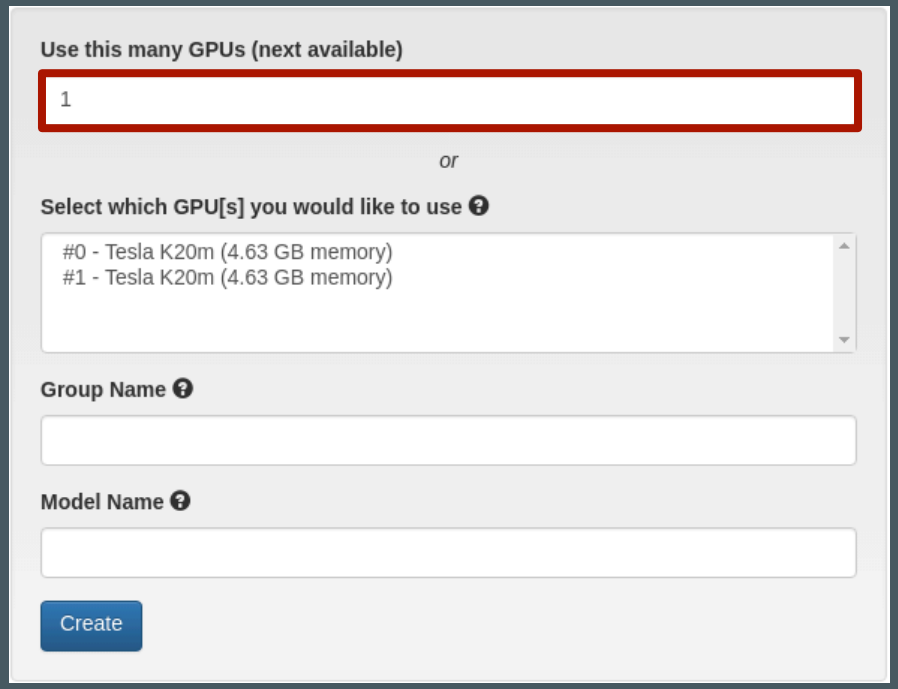
Crop Size

- Remove some pixels from the images before they are given to the neural network
- Very good in autoencoder neural network

Add a new model



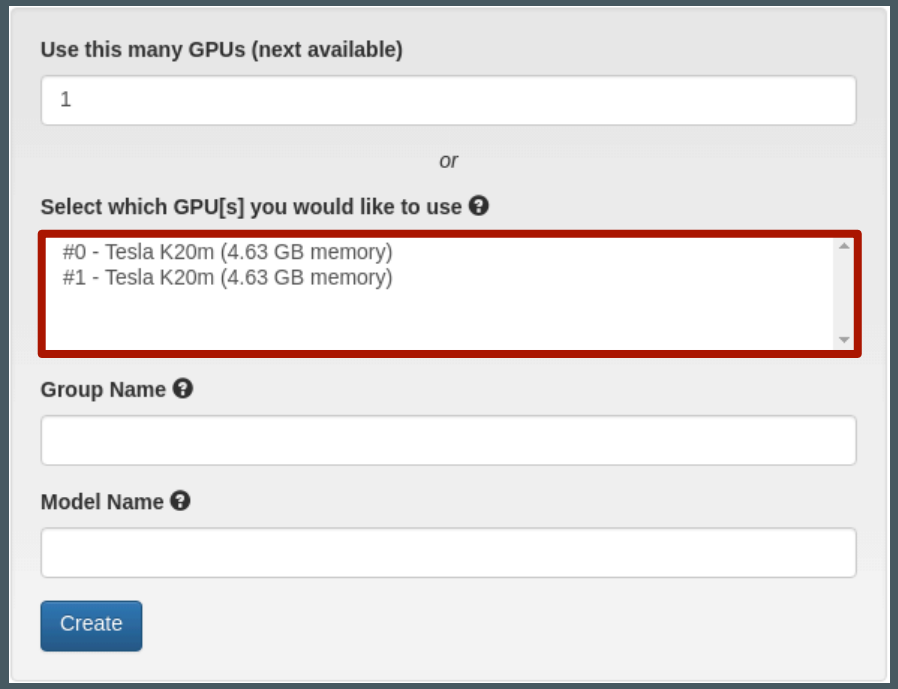
Add a new model



How many GPUs

- Since we only requested 1 GPU, we have to put 1 GPU

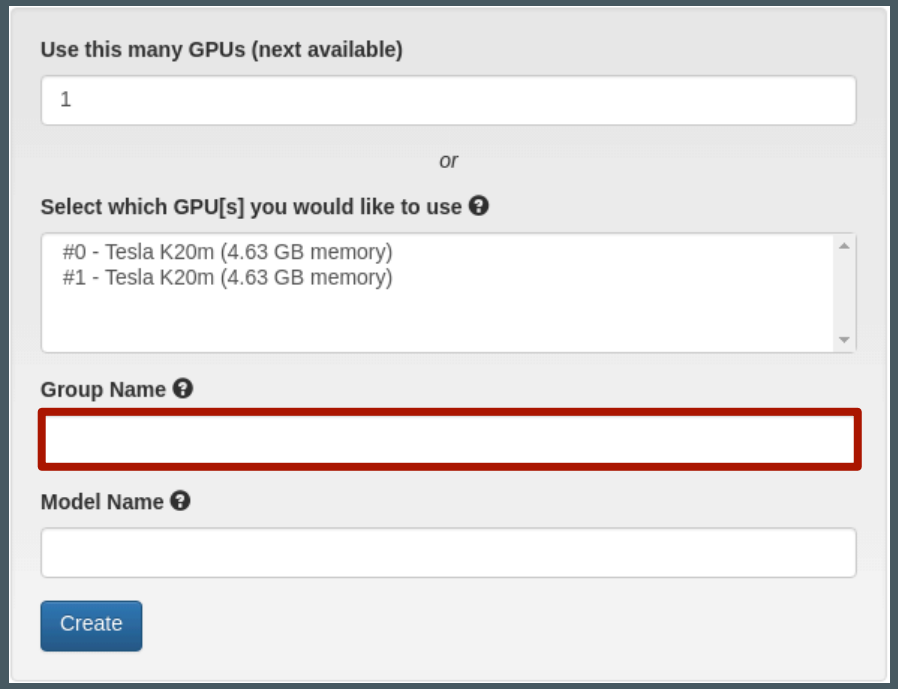
Add a new model



Select which GPU

- It's listed two GPUs because the two GPUs are in one node

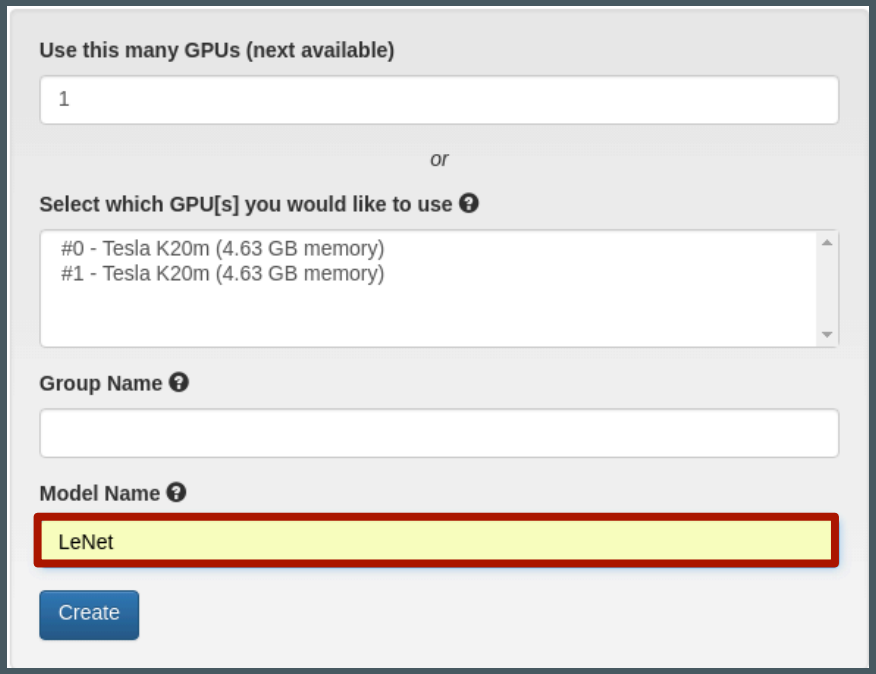
Add a new model



Group Name (optional)

- This is just a reference name to group a bunch of models

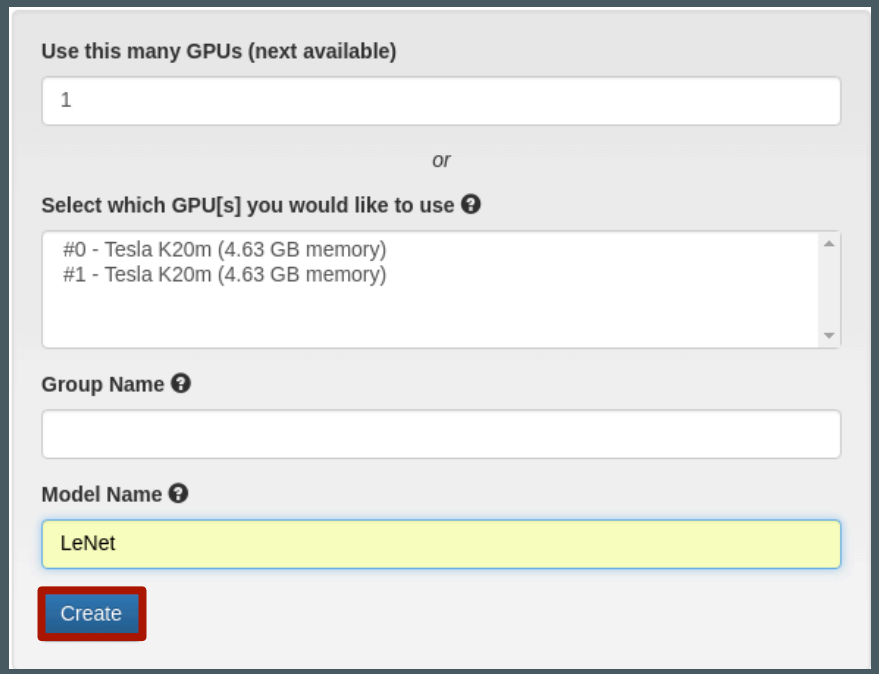
Add a new model



Model Name (required)

- This is just a reference name to be called in importing a model

Train


Use this many GPUs (next available)
1
or
Select which GPU[s] you would like to use
#0 - Tesla K20m (4.63 GB memory)
#1 - Tesla K20m (4.63 GB memory)
Group Name
Model Name
LeNet
Create