

Table of Contents

 Learn

 Colab

 Notebook

 GitHub

[Learn the Basics](#) || [Quickstart](#) || [Tensors](#) || [Datasets & DataLoaders](#) || [Transforms](#) || [Build Model](#) || [Autograd](#) || [Optimization](#) || **[Save & Load Model](#)**

SAVE AND LOAD THE MODEL

In this section we will look at how to persist model state with saving, loading and running model predictions.

```
import torch
import torchvision.models as models
```

Saving and Loading Model Weights

PyTorch models store the learned parameters in an internal state dictionary, called `state_dict`. These can be persisted via the `torch.save` method:

```
model = models.vgg16(pretrained=True)
torch.save(model.state_dict(), 'model_weights.pth')
```

To load model weights, you need to create an instance of the same model first, and then load the parameters using `load_state_dict()` method.

```
model = models.vgg16() # we do not specify pretrained=True, i.e. do not load default weights
model.load_state_dict(torch.load('model_weights.pth'))
model.eval()
```

• NOTE

be sure to call `model.eval()` method before inferencing to set the dropout and batch normalization layers to evaluation mode. Failing to do this will yield inconsistent inference results.

Saving and Loading Models with Shapes

When loading model weights, we needed to instantiate the model class first, because the class defines the structure of a network. We might want to save the structure of this class together with the model, in which case we can pass `model` (and not `model.state_dict()`) to the saving function:

```
torch.save(model, 'model.pth')
```

We can then load the model like this:

```
model = torch.load('model.pth')
```

• NOTE

This approach uses Python `pickle` module when serializing the model, thus it relies on the actual class definition to be available when loading the model.

Related Tutorials

[Saving and Loading a General Checkpoint in PyTorch](#)

Total running time of the script: (0 minutes 8.593 seconds)

[< Previous](#)

[Next >](#)

Rate this Tutorial

    

Docs

Access comprehensive developer documentation for PyTorch

[View Docs](#)

Tutorials

Get in-depth tutorials for beginners and advanced developers

[View Tutorials](#)

Resources

Find development resources and get your questions answered

[View Resources](#)

PyTorch

Get Started

Features

Ecosystem

Blog

Contributing

Resources

Tutorials

Docs

Discuss

Github Issues

Brand Guidelines

Stay Connected