Pytorch Overview

Welcome to my repository on Pytorch and machine learning library for Python. The aim of this repository is to give you a foundation in when, why and how to use Pytorch. This repository includes the following:

Included resources:

* Introduction to Pytorch Powerpoint
  + The aim of this presentation is to give you terminology, tips and a base understanding of the background of pytorch.
* Torch Diagram pdf
  + This is included in a slide of the powerpoint, but it’s helpful to understand the difference between Torch, Torchvision, and Torchaudio.
* Tensors Jupyter Notebook
  + A very basic starting to see and play with Tensors which are a pivotal part of Pytorch.
* Efficientnet Jupyter Notebook
  + This highlights how to load a dataset and premade model from Torchvision. It also brings you through the journey of using a premade model.
* SVHN Jupyter Notebook
  + This builds on the previous notebook and expands our knowledge of Tensors. We’re able to customize the model we previously used to increase performance(hopefully). We stop and look into a Tensor with actual data, and look more closely at the performance of the model.

Get Started

To install Pytorch it’s very simple: open a terminal and type the following command:

pip3 install torch torchvision torchaudio

If you’d like to customize your setup to include using a GPU, or if you have Mac or Linux OS, please follow the link for install instructions: [Start Locally | PyTorch](https://pytorch.org/get-started/locally/)

Additional Resources

Learn the Basics: [Learn the Basics — PyTorch Tutorials 2.6.0+cu124 documentation](https://pytorch.org/tutorials/beginner/basics/intro.html)

Basics Youtube Series: [Introduction to PyTorch — PyTorch Tutorials 2.6.0+cu124 documentation](https://pytorch.org/tutorials/beginner/introyt/introyt1_tutorial.html)

Reference Guide: [PyTorch Cheat Sheet — PyTorch Tutorials 2.6.0+cu124 documentation](https://pytorch.org/tutorials/beginner/ptcheat.html)

Documentation: [PyTorch documentation — PyTorch 2.6 documentation](https://pytorch.org/docs/stable/index.html)

Torchvision Models: [Models and pre-trained weights — Torchvision main documentation](https://pytorch.org/vision/main/models.html)

Torchvision Datasets: <https://pytorch.org/vision/main/datasets.html>