Guide to build a Gpt model in Python using Pytorch

Step 1: Learing how to use python at an introductory level

A. **Choosing a python package and environment based on ease and community support:** I recommend learning to use the conda environment, as it has really good community support. I learned how to use and install it, and perform basic tasks like creating an environment using the material that can be found at the following links:

-https://www.anaconda.com/download#downloads

-https://conda.io/projects/conda/en/latest/user-guide/tasks/manage-environments.html

B. **Choosing a python IDE (Integrated development environment):** For Python, many excellent IDEs exist. I learned how to use Pycharm, and it can be downloaded from this link: https://www.jetbrains.com/pycharm/download/other.html
This can be used to locally build and test codes on your computer.

C. **Learning to use Jupyter Notebook:** Jupyter notebook is really useful for running interactive Python codes, which was needed to prepare for the class demos. I learned how to install and use jupyter notebook by reading online resources such as here: https://stackoverflow.com/questions/58068818/how-to-use-jupyter-notebooks-in-a-conda-environment. Some material to use jupyter notebook can be found here: https://www.youtube.com/watch?v=HW29067qVWk

Step 2 : Learn basic machine learning concepts, how python is used in machine learning, and how to bulid a basic gpt model in python from scratch from the following links:
https://builtin.com/machine-learning/python-machine-learning
https://www.youtube.com/watch?v=i_LwzRVP7bg
https://www.youtube.com/watch?v=kCc8FmEb1nY&t=15s

Step 3 : Create a conda environment for your project and install all needed packages:
- Numpy: https://anaconda.org/anaconda/numpy
- Pytorch: https://anaconda.org/pytorch/pytorch
- Mingpt: https://github.com/karpathy/minGPT

Tutorial on how to use Pytorch can be found here:
https://pytorch.org/tutorials/beginner/pytorch_with_examples.html

Step 4 : Understand a simple GPT implementation from this code base: https://colab.research.google.com/drive/1JMLa53HDuA-i7ZBmqV7ZnA3c_fvtXnx-?usp=sharing#scrollTo=hoelkOrFY8bN

This code base should be run (debugging may be necessary as some steps may break in the future as the libraries are updated) in a Jupyter Notebook environment to produce interactive output.

Step 5 : Learn github to publicly share and host your project by reading the tutorial here:
https://www.youtube.com/watch?v=v_1iqtOnUMg

Share your project files by creating your own github repository.