

Technical Report - Project Setup Guide

Prerequisites

Before we start, we need to prepare the prerequisites for the environment configuration:

- Python (recommended version: Python 3.x)
- Vscode
- Anaconda
- Pytorch 2.3.0
- Cuda 12.1
- Jupyter Notebook

Hardware Requirements

To ensure smooth operation and optimal performance, it is recommended to have the following hardware specifications:

- Processor: Intel Core i5 or equivalent
- RAM: 8GB or higher
- Storage: 256GB SSD or higher

Steps for setting up the environment are as follows with Vscode or Jupyter Notebook:

1. Install Python with Anaconda/Miniconda

Install Miniconda to manage Python and its packages effectively: <https://docs.anaconda.com/anaconda/install/>

2. Install Vscode/Jupyter Notebook

Once Python is installed, then install Jupyter Notebook /Vscode, use the command in your terminal: `pip install notebook` or Alternatively, download and install Visual Studio Code from: <https://code.visualstudio.com/>

3. Start Vscode/Jupyter Notebook

To start Jupyter Notebook/Vscode, navigate to the directory regarding to the project files using the terminal or prompt, and run the command: `jupyter notebook`

Then Jupyter Notebook server will start or just start coding in Vscode.

4. Start with files uploaded on D2L

- 1: Run VIT_pretrained.py to load other content
- 2: Run VIT_training.py
- 3: Run hybrid_vgg19+VIT.py + style_transfer_VGG19.iqynb
- 4: Run evaluation.py

Download the dataset from the below link of Cifar-100:

- <https://www.cs.toronto.edu/~kriz/cifar.html>
- <https://www.cs.toronto.edu/~kriz/cifar-100-python.tar.gz>