SpotFinder Project Setup Guide (CPU Version)

This document provides step-by-step instructions to set up the SpotFinder project for the CPU version. Follow these steps to ensure a smooth installation and setup process.

Step 1: Install Anaconda

Anaconda is a distribution of Python and R for scientific computing and data science. It includes a package manager called conda.

1. Download Anaconda from the official website: https://www.anaconda.com/products/distribution
2. Follow the installation instructions for your operating system.

Step 2: Ensure You Have a Compatible CPU

The SpotFinder project can run on a CPU. Ensure your machine has a compatible CPU.

1. Check your system specifications to confirm the presence of a compatible CPU.

Step 3: Install PyTorch (CPU Version)

PyTorch is an open-source machine learning library based on the Torch library.

1. Open Anaconda Prompt (or your preferred terminal if you have Anaconda installed).
2. Run the following command to install PyTorch (CPU version):

```
conda install pytorch torchvision torchaudio cpuonly -c pytorch
```

Step 4: Install Project Requirements

The SpotFinder project requires several Python packages. Install them using pip:

1. Create and activate a new conda environment (optional but recommended):

```
conda create --name spotfinder_cpu python=3.8
conda activate spotfinder_cpu
```

2. Install the required packages:

pip install ultralytics==8.2.72 youtube-dl==2021.12.17 yt-dlp==2024.7.2 pafy==0.5.5 opencv-python==4.10.0.84

Step 5: Navigate to the Project Folder

1. Open CMD (Command Prompt).
2. Navigate to the main folder of the SpotFinder project using the cd command. For example:

```
cd path\to\spot-finder
```

Step 6: Run the SpotFinder Project

1. Ensure you are in the main folder of the project.
2. Run the main script:

```
python main.py
```

Follow these steps to set up and run the SpotFinder project. If you encounter any issues, ensure all dependencies are correctly installed.