Jetson Orin Nano Setup

CS 4391 Introduction Computer Vision

Instructor: Yu Xiang

The University of Texas at Dallas
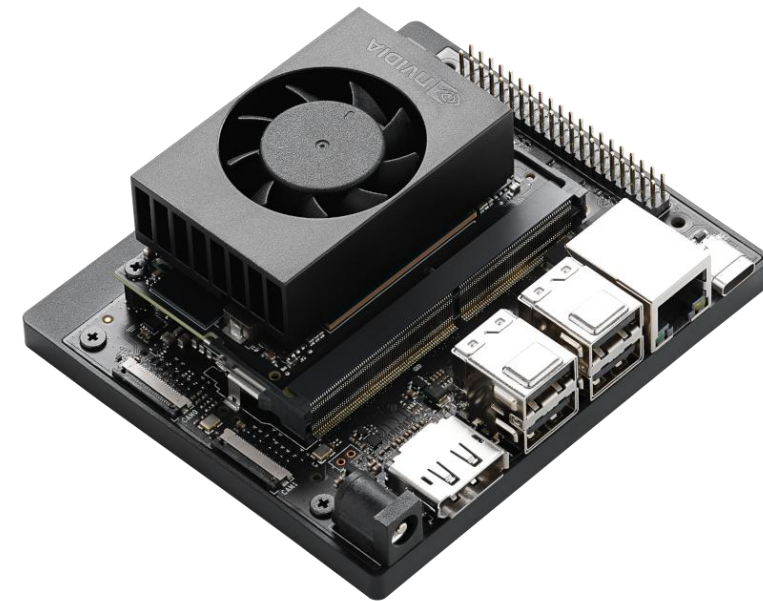
Introduction

- Introduction of the Jetson Orin Nano from NVIDIA:
https://developer.nvidia.com/embedded/learn/get-started-jetson-orin-nano-devkit#intro

- Initial Setup Guide for Jetson Orin Nano Developer Kit
https://www.jetson-ai-lab.com/tutorials/initial-setup-jetson-orin-nano/

Unboxing

Part	Quantity
NVIDIA Jetson Orin Nano Super Developer Kit	1
Keyboard and mouse	1
SD Card Reader	1
DisplayPort to HDMI Adapter	1
Logitech C270 HD Webcam	1
SanDisk 128GB Extreme microSDXC	1
RaspBerry Pi Screen, 10.1 Inch Touchscreen	1
8MP IMX219 Camera	-
Instructions Sheet	2

Display   https://www.amazon.com/dp/B0B9M5SCG4?th=1

Step 1: Download JetPack 6.2 image

- https://developer.nvidia.com/embedded/jetpack-sdk-62

- JetPack 6.2 is the latest production release of JetPack 6. This release includes Jetson Linux 36.4.3, featuring the Linux Kernel 5.15 and an Ubuntu 22.04-based root file system. The Jetson AI stack packaged with JetPack 6.2 includes CUDA 12.6, TensorRT 10.3, cuDNN 9.3, VPI 3.2, DLA 3.1, and DLFW 24.0.

Installing JetPack

SD Card Image Method for Jetson Orin Nano Developer Kit

FOR JETSON ORIN NANO DEVELOPER KIT CURRENTLY RUNNING JETPACK 6.X

Download JetPack 6.2 SD card image for Jetson Orin Nano Developer Kit
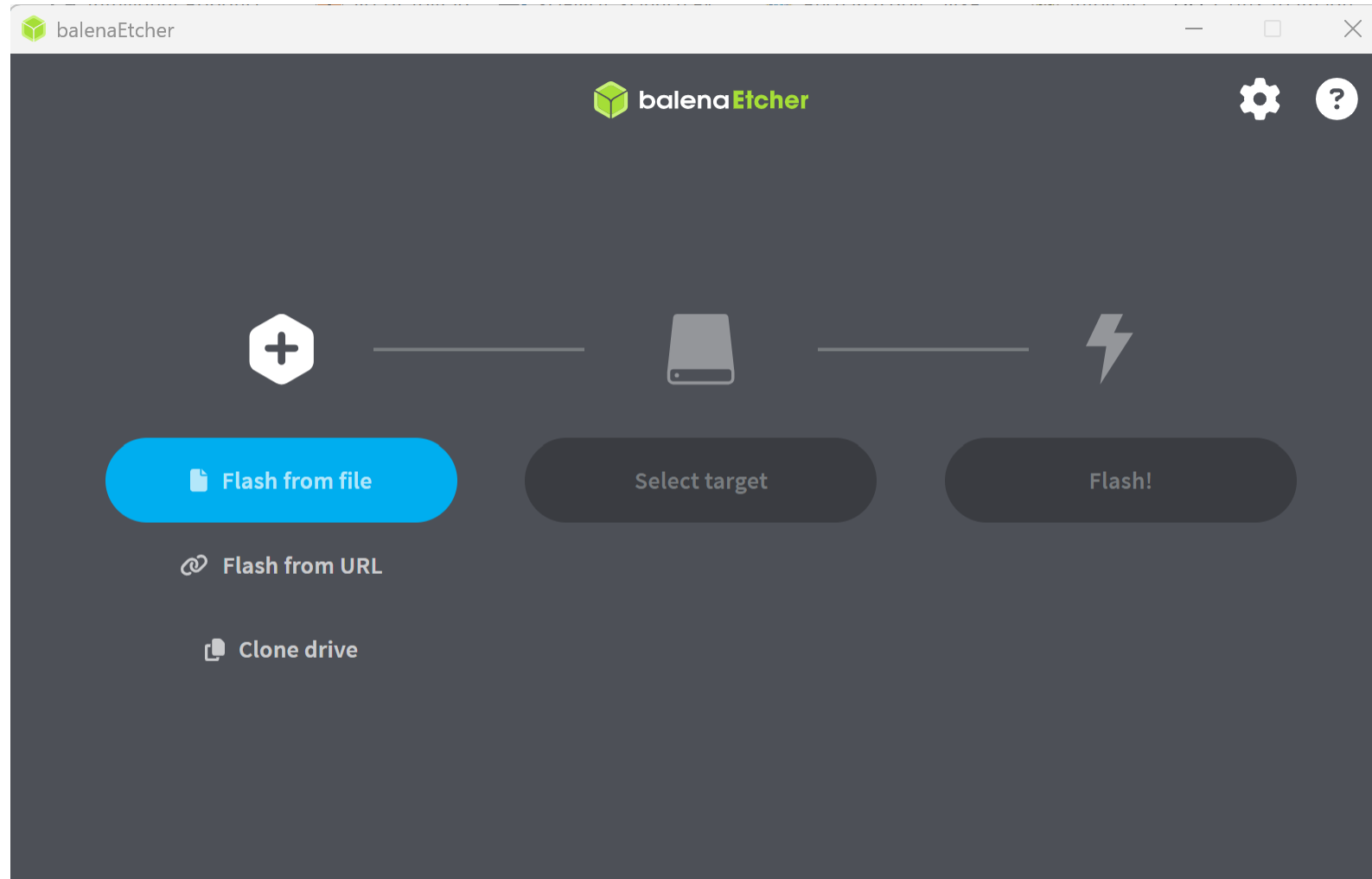
Follow the instructions provided in Getting Started Guide
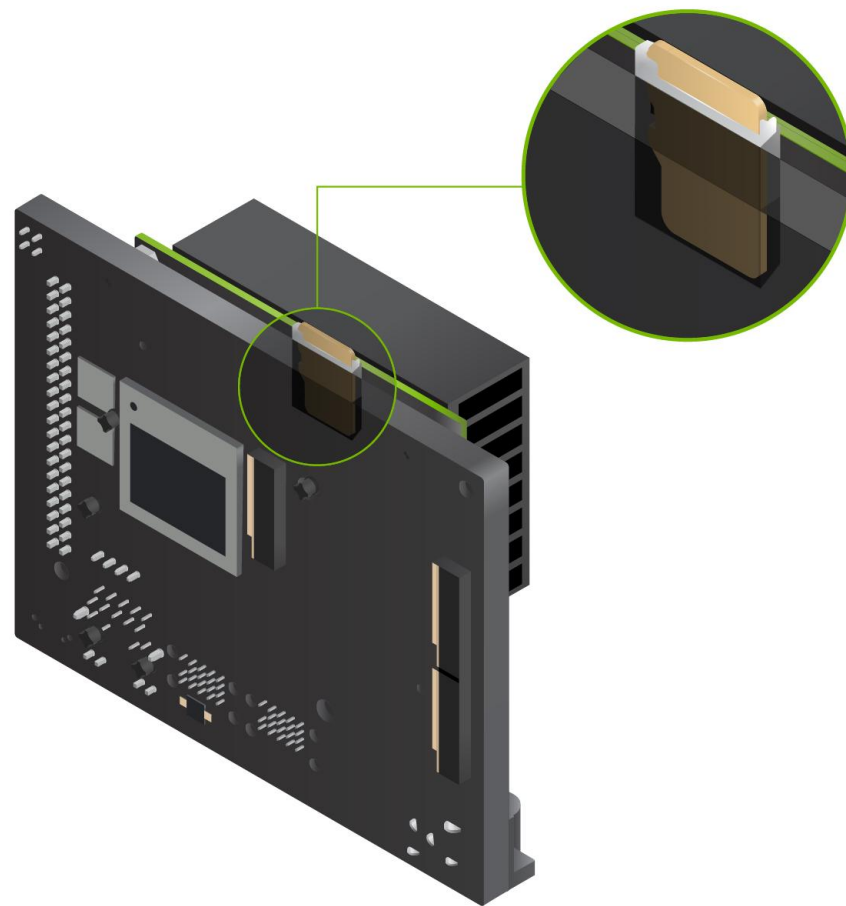
Step 2: Download Balena Etcher

- https://etcher.balena.io/

Yu Xiang

Step 3: Flash the SD Card

Yu Xiang

Step 4: Insert the flashed microSD card

Step 5: Software setup

- Connect the keyboard, mouse, monitor
- **Power-on** by plugging the DC power supply

- **Complete the initial software setup**

- sudo apt update
- sudo apt upgrade
- sudo reboot

Step 6: Set up the USB camera

- Open a terminal: ctrl + alt + t

- pip install opencv-python

- git clone
  https://github.com/yuxng/cs4391_spring26.git

- python test_usb_camera.py

Questions?

Yu Xiang