NVIDIA Jetson AGX Orin 64GB Setup

Setup VNC server on the Jetson developer kit

I am following the howto: https://developer.nvidia.com/embedded/learn/tutorials/vnc-setup

ReSpeaker USB Microphone Array

Flashing new firmware according to https://wiki.seeedstudio.com/ReSpeaker-USB-Mic-Array/

I am flashing the **“1 channel firmware”**:

```
sudo apt-get update
sudo pip install pyusb click

git clone https://github.com/respeaker/usb_4_mic_array.git
cd usb_4_mic_array

# if you want to use 1 channel,then the command should be like:
sudo python dfu.py --download 1_channel_firmware.bin

# Alternative, did not work for me (mic not showing up in GNOME):
# sudo python dfu.py --download 6_channels_firmware.bin  # The 6 channels version
```

Then disconnect ReSpeaker from USB and reconnect. The mircophone occurs in the GNOME audio settings menu.

More ReSpeaker Info from SeeedStudio Wiki

- https://wiki.seeedstudio.com/ReSpeaker_Product_Guide/
- https://wiki.seeedstudio.com/ReSpeaker_Mic_Array_v2.0/

Install Audacity

To test the microphone and to record audios for training the LLM and ASR.

Buggy or weird behavior of Audacity on Linux.

Don't do that: “sudo snap connect audacity:alsa”. In case you did you can “sudo snap disconnect audacity:alsa”.

Don't use the button “Access ot ALSA has been granted.”

Rather click on button “Start and do not ask again” when Audacity comes up.

Whisper by Dusty-NV

I am following https://www.jetson-ai-lab.com/tutorial_whisper.html

```
git clone https://github.com/dusty-nv/jetson-containers
bash jetson-containers/install.sh
```

```
jetson-containers run $(autotag whisper)
```

Open ...

Whisper by Seeed Studio

```
git clone https://github.com/LJ-Hao/Deploy-Whisper-on-NVIDIA-Jetson-Orin-for-Real-time-Speech-to-Text.git
cd Deploy-Whisper-on-NVIDIA-Jetson-Orin-for-Real-time-Speech-to-Text
pip install -r requirements.txt
sudo apt update && sudo apt install ffmpeg
arecord -D hw:2,0 --dump-hw-params #set microphone rate to 16000
```

PyAudio missing. Requires trouble shooting ... On hold ...

llamaspeak

https://www.jetson-ai-lab.com/tutorial_llamaspeak.html

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