1. Make a bootable USB thumb drive with file: Lubuntu-DonkeyCar_vX.Xx-17.04.iso
   Windows users can try Rufus(https://rufus.akeo.ie/)
   Mac users can try Etcher(
   https://tutorials.ubuntu.com/tutorial/tutorial-create-a-usb-stick-on-macos#0)
   Linux users can use unetbootin (sudo apt install unetbootin)

2. Boot up your computer from the USB thumb drive. The process varies from computer to computer so determine what method works for you. On Lenovo laptops it's typically holding down the Fn+F12 buttons as soon as the large "Lenovo" name shows up on bootup. Then selecting "UEFI USB" device option.

   hit enter when the "try Lubuntu without installing" option is presented and wait for the desktop to appear.

3. Connect your computer to your preferred network(ethernet or WiFi) using the Networks icon found in the bottom right corner. A few default documentation web pages are presented when you open up the web browser by double clicking on the Firefox icon on the desktop.

4. Create your Raspberry Pi image.
   Also setup its hostname and WiFi by inserting a 8GB or more uSD card(cancel any dialogs wanting to display the uSD) and then opening up a Terminal window and typing:
   script-zipdd ~/Downloads/donkey_2.img.zip yourname-donkeycar
   Then enter the questions about your Wifi setup and wait until it finishes.

5. Remove the uSD card and put it into your DonkeyCar and boot it up. In about 1 minutes you can ssh into it using the terminal window like this:
   ssh pi@yourname-donkeycar.local
   BUT, before you do that, let's upgrade the donkeycar software on the rPi to the latest from the Master branch in github(https://github.com/wrosco/donkey). Do this with:
   script-rpi-donkeyUpdate yourname-donkeycar.local

6. Your default password will be "raspberry". It's recommended you eventually change it using the raspi-config program by typing:
   sudo raspi-config
   Besides changing your password, check to be sure the Camera and I2C options have been enabled. You will find them in menu item 5. Interfacing Options

7. Customizing your setup: If you'd like to use the PS3 Bluetooth controller, now would be the time to edit the config.py and set USE_JOYSTICK_AS_DEFAULT = True. Also, things which might need customizing are usually found in this file on the rPi(~/d2/config.py). Things like: STEERING_LEFT_PWM = 460

STEERING_RIGHT_PWM = 290 THROTTLE_FORWARD_PWM = 500
THROTTLE_STOPPED_PWM = 350 THROTTLE_REVERSE_PWM = 220
To enable the bluetooth on the rPi and start the pairing process with your PS3 Controller, run this: **script-setup-bluetooth yourname-donkeycar.local**

8. Get training data(tubs) by driving your Donkey Car around the track to accumulate images and steering/throttle data. Start driving with:
   script-drive yourname-donkeycar.local
   If using the webController, point your browser to yourname-donkey.local:8887 and pick the joystick option and drive.

9. Get your training tub data from your car to your local d2/data directory:
   Create you local directory with **script-local-createcar** and then run:
   script-rsync-data yourname-donkeycar.local

10. Train your pilot(myPilot) using this command:
    script-train your-tub-name
    Note: just running script-train will present you with a list of your tubs.

11. Copy your pilot(myPilot) back to your DonkeyCar using:
    script-rsync-pilot yourname-donkeycar.local

12. Run your pilot with this:
    script-auto-drive yourname-donkeycar.local

Scripts Listing of /home/lubuntu/bin

script-zipdd - script-zipdd <path to donkey_2.img.zip file> <yourname-donkeycar>
copies Donkey rPi image file to uSD and customizes it for your preferred WiFi router and sets the rPi hostname

script-rpi-donkeyUpdate - script-rpi-donkeyUpdate <yourname-donkeycar.local>
Runs git pull, pip install, donkey createcar, etc to get the latest donkey software on the rPi and a new d2 directory(~/d2).

script-local-createcar - script-local-createcar
Runs donkey command to create the d2 directory(~/d2)

script-remote-createcar - script-remote-createcar <yourname-donkeycar.local>
Runs donkey command to create the d2 directory(~/d2) on the rPi

script-rsync-data - script-rsync-data <yourname-donkeycar.local>

Copies your training data tubs(~/d2/data/*) from your Donkey Car to your computer(~/d2/data/*)

script-train - script-train <tub directory name>
Runs the Tensorflow training on your tub data

script-rsync-pilot - script-rsync-pilot <yourname-donkeycar.local>
Copies your trained pilot(~/d2/models/myPilot) from your computer to your Donkey Car(~/d2/models/myPilot)

script-drive - script-drive <yourname-donkeycar.local>
Runs ssh to your Donkey Car and runs the drive command.

script-auto-drive - script-auto-drive <yourname-donkeycar.local>
Runs ssh to your Donkey Car and runs the drive command with model, myPilot.

VERSION HISTORY

0.1c Adds updated script-zipdd with WiFi and hostname setup. (/home/lubuntu/bin)
Trimmed wpa_supplicant.conf file (/home/lubuntu/Downloads)
Added HowToDonkey.txt file to desktop. (/home/lubuntu/Desktop)
Added “Drive your car” setup page to default Firefox home pages.

0.1d Change to Lubuntu 17.04 base for working persistent storage boot options.
Add disabling wifi sleep in wlan0.conf
Fixed missing wlan0.conf file in Downloads directory
Update HowToDonkeyCar.txt changed to HowToDonkeyCar.pdf
-Added document listing of scripts
Added script-drive to the list of usable scripts
Added local and remote versions of createcar script
Added script-auto-drive to start driving using generated myPilot

0.1e Change to default wpa_supplicant.conf to contain default networks
Added script-rpi-donkeyUpdate to get the rPi to the latest version of donkey software.
Added script-setup-bluetooth placeholder script for update to the joystick bluetooth
Updated this HowToDonkeyCar.pdf to include the new script and what might be customized in the ~/d2/config.py file.
Fixed script-train due to changes in how the passed arguments worked.

0.1e1 Added script-setup-bluetooth script for update to the joystick bluetooth
Updated this HowToDonkeyCar.pdf to include reference to the bluetooth setup script