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Part 1:

Install Ubuntu 18.04 into wsl-2 on your Windows 10 computer

1. Ensure that your version of Windows 10 is Version 1903 or higher, with Build 18362 or higher.

- > type 'System Information' in the Windows search bar and open it
- > You will see the Version listed (in my case it is 10.0.19042 Build 19042)
- > if it is an older version and build then update to the most recent
- > type 'Check for updates' in the windows search bar and open it
- > Update all windows updates and restart is asked

2. Ensure that you have enabled virtualisation in the BIOS

-> restart your machine and as it restarts hold down the BIOS key, usually F2, F11 or Esc depending on manufacturer

-> Navigate in the BIOS settings for "Virtualisation" and ensure it is enabled, every manufacturer will have a slightly different BIOS menu system

-> Restart the machine and accept any updates if requested

3. Enable dependencies

-> type 'Turn Windows features on or off' in the windows search bar and open it

-> ensure that 'Virtual Machine Platform' and 'Windows Subsystem for Linux' have been ticked

-> If you have selected either click ok and restart if requested

4. Ensure wsl version2 is installed and selected

-> download wsl update installer from here:

https://wslstorestorage.blob.core.windows.net/wslblob/wsl_update_x64.msi

-> run the installer (follow instructions)

-> Open a Powershell as administrator

-> run the command 'wsl --set-default-version 2'

5. Install Ubuntu 18.04

-> type 'Microsoft store' in the windows search bar and open it

-> type 'Ubuntu' in the Microsoft store search

-> select Ubuntu 18.04, 'Get' and then 'install' (approximately 270MB)

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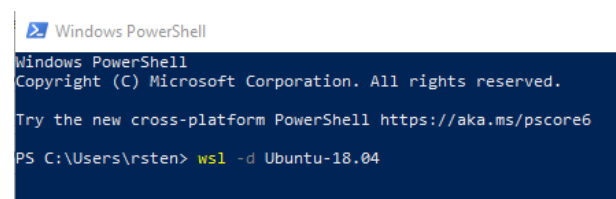
Part 2:

Conda environment

Using the wsl:

-> Open a Powershell

-> run the command 'wsl -d Ubuntu-18.04'



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

PS C:\Users\rsten> wsl -d Ubuntu-18.04
```

In WSL or Linux terminal:

- 1) Navigate to folder containing the environment.yml file
- 2) Create the environment

```
conda env create --prefix ./env --file environment.yml
```

- 3) Activate the environment:

```
conda activate ./env
```

The environment contains all of the libraries etc required, including Numpy and NEST

- 4) Launch Jupyter notebooks

```
jupyter lab
```

```
(env)stenti@DESKTOP-PA9U15S:/mnt/c/Users/rsten/Documents/BRL/Projects/HD_SNN$ conda activate ./env
(env)stenti@DESKTOP-PA9U15S:/mnt/c/Users/rsten/Documents/BRL/Projects/HD_SNN$ jupyter lab
[I 15:18:59.178 LabApp] JupyterLab extension loaded from /home/stenti/anaconda3/lib/python3.8/site-packages/jupyterlab
[I 15:18:59.178 LabApp] JupyterLab application directory is /home/stenti/anaconda3/share/jupyter/lab
[I 15:18:59.180 LabApp] Serving notebooks from local directory: /mnt/c/Users/rsten/Documents/BRL/Projects/HD_SNN
[I 15:18:59.180 LabApp] Jupyter Notebook 6.1.4 is running at:
[I 15:18:59.180 LabApp] http://localhost:8888/?token=8385b3134ca04597adbc3227071fabbb1f75319575661eb
[I 15:18:59.180 LabApp] or http://127.0.0.1:8888/?token=8385b3134ca04597adbc3227071fabbb1f75319575661eb
[I 15:18:59.180 LabApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 15:18:59.232 LabApp]

To access the notebook, open this file in a browser:
    file:///home/stenti/.local/share/jupyter/runtime/nbserver-1278-open.html
Or copy and paste one of these URLs:
    http://localhost:8888/?token=8385b3134ca04597adbc3227071fabbb1f75319575661eb
    or http://127.0.0.1:8888/?token=8385b3134ca04597adbc3227071fabbb1f75319575661eb
```

- 5) WSL ONLY: Open in browser

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Part 3:

Day to day usage

-> Open a Powershell

-> run the command 'wsl -d Ubuntu-18.04'

-> navigate to the environment folder

-> activate the environment

```
conda activate ./env
```

-> launch jupyter lab

```
jupyter lab
```