# 1. Install WSL Windows Subsystem for Linux version 2 and Ubuntu 20.04

- Enter this command in an **administrator** PowerShell or Windows Command Prompt and then restart your machine (only works if WSL is not installed):

```
wsl --install
```

- Upgrade version from WSL 1 to WSL 2:

wsl --set-default-version 2

- To see a list of available Linux distributions available for download, enter:

wsl --list --online

- By default, the installed Linux distribution will be Ubuntu. To change the distribution installed, enter (replace <Distribution Name> with the name of the distribution you would like to install):

```
wsl --install -d <Distribution Name>
```

 You can list your installed Linux distributions and check the version: wsl --list -v

```
- To set the default Linux distribution used with the wsl command, enter:
```

wsl --setdefault <DistributionName>

# 2. Install and start VcXsrv Windows X Server

- Download and install VcXsrv from: https://sourceforge.net/projects/vcxsrv/files/latest/download

- Start VcXsrv:

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Display settings	×
Select display settings Choose how VcXsrv display programs	
Multiple windows         Image window         Image window	
Display number -1 (Specify -1 to let vcxsrv automatically choose one)	
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Se	elect how to start clients			
•	Start no client			
	This will just start the xserver. You will be able to start local clients later.			
C	Start a program			
	This will start a local or remote program which will connect to the xserver. You will be able to start local clients later too. Remote programs are started using SSH.			
C	Open session via XDMCP			
	This will start a remote XDMCP session. Starting local clients later is limited. This option is not available with the ''Multiple windows'' mode.			

Extra settings	×
Extra settings	
Clinkoord	
Start the integrated clipboard manager Primary Selection Also map the PRIMARY selection to the windows clipboard.	
Native opengl Use the native windows opengl library (wgl). Make sure to export the LIBGL_ALWAYS_INDIRECT environment variable.	
Use this when you want vcxsrv to accept connections from all clients.	
Additional parameters for VCXsrv	
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Finish configuration	×
Configuration complete	
Configuration is complete. Click Finish to start VcXsrv.	
You may also save the configuration for later use. Save configuration	
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- Next time, saved file from step 6 (config.xlaunch) can be used to start VcXsrv.

- Allow VcXsrv in the Windows firewall settings.

	Prindows Security Alert					
	Windows Defender Firewall has blocked some features of this app					
	Windows Defender Firewall has blocked some features of VcXsrv windows xserver on all public and private networks.					
	X	Name:	VcXsrv windows xserver			
	<u> </u>	Publisher:	Unknown			
		Pat <u>h</u> :	C:\program files\vcxsrv\vcxsrv.exe			
	Allow VcXsrv windows xserver to communicate on these networks:					
	Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)					
	What are the risks of allowing an app through a firewall?					

Alternatively, you can start VcXsrv from the command line by entering:

"%ProgramFiles%\VcXsrv\VcXsrv.exe" :0 -multiwindow -clipboard -wgl -ac

### 3. Setup ~/.bash\_profile

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- To start using WSL, open up a PowerShell terminal and type: ws1

```
- Add the following lines to the file ~/.bash_profile
export DISPLAY_NUMBER="0.0"
export DISPLAY=$(grep -m 1 nameserver /etc/resolv.conf | awk '{print $2}'):$DISPLAY_NUMBER
source ~/.bashrc
```

- Finally, type: source ~/.bash\_profile

#### 4. Install Anaconda

Find the latest version of Anaconda for Python 3 at <u>https://repo.anaconda.com/archive</u>. Start Ubuntu and type:

```
cd /tmp
curl https://repo.anaconda.com/archive/Anaconda3-2022.05-Linux-x86_64.sh --output anaconda.sh
bash anaconda.sh
```

Accept the license terms and once installation is complete type yes so that you can initialize Anaconda3.

Add this line to .bash\_profile:

```
export PATH=~/anaconda3/bin:$PATH
```

# 5. Install ISP.

Instructions detailed in this link: https://projectisp.github.io/ISP\_tutorial.github.io/install/#installation

```
cd ~
git clone <u>https://github.com/ProjectISP/ISP.git</u>
cd ~/ISP
git checkout ISP_2.0_development
git pull
cd ~/ISP/install
chmod u+x ISP_installer.sh
./ISP_installer.sh
```

conda activate isp

python ~/ISP/start\_isp.py

