

Installing SaVi in Windows

To install and run SaVi in Windows one needs the following components

- **Enable** the WSL and relevant features
- Install the **Ubuntu** app from the **Microsoft Store**
- Install an **X window server**
- **Run** a set of commands to install SaVi + geomview
- **Run** SaVi through the Ubuntu app

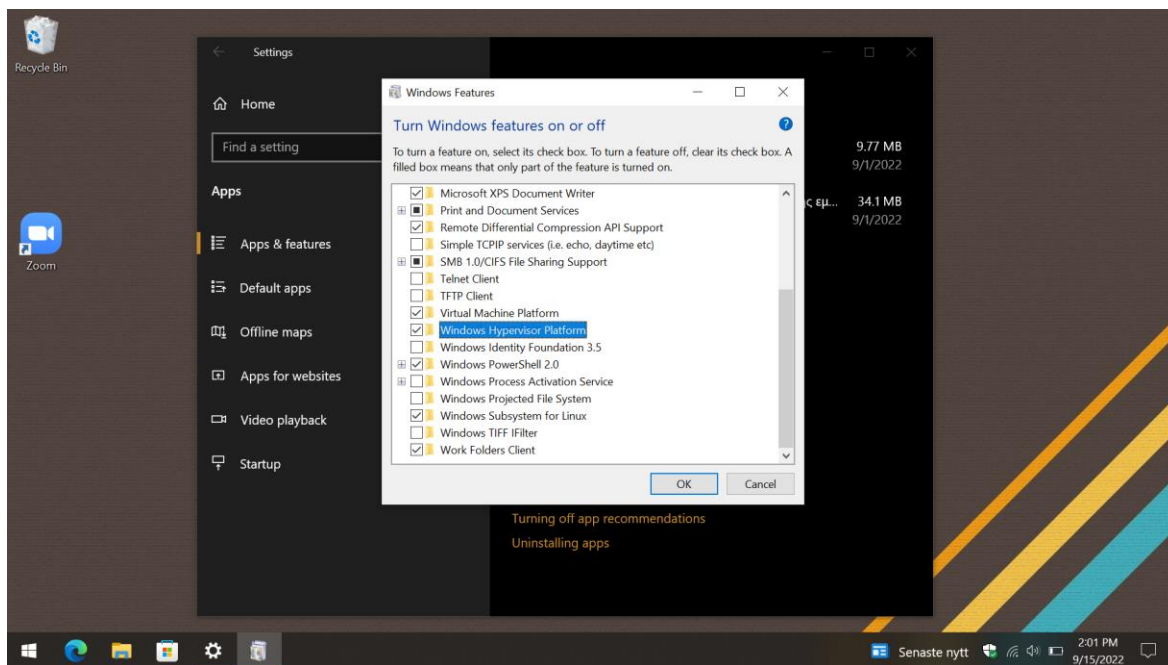
Step 1: Enable WSL and relevant features

Search for **Windows Features** in the start menu and the following window will appear. Check the following and restart

Virtual Machine Platform

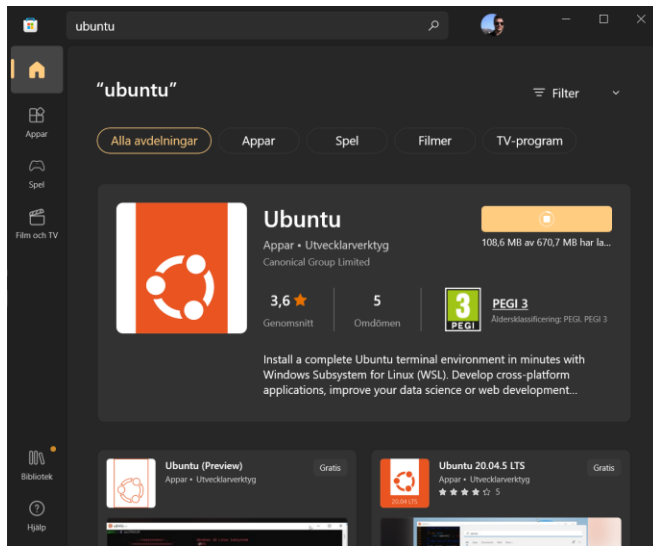
Windows Hypervisor Platform

Windows Subsystem for Linux



Installing SaVi in Windows

Step 2: Install the Ubuntu app from the Microsoft Store



When this is done open and configure

```
periklis@DESKTOP-45A4IE5: ~
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: periklis
New password:
Retype new password:
passwd: password updated successfully
Installation successful!
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 4.4.0-19041-Microsoft x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage
/etc/update-motd.d/50-landscape-sysinfo: 17: cannot create /var/lib/landscape/landscape-sysinfo.cache: Permission denied

0 updates can be applied immediately.

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

This message is shown once a day. To disable it please create the
/home/periklis/.hushlogin file.
periklis@DESKTOP-45A4IE5:~$
```

Step 3: Install an X window server

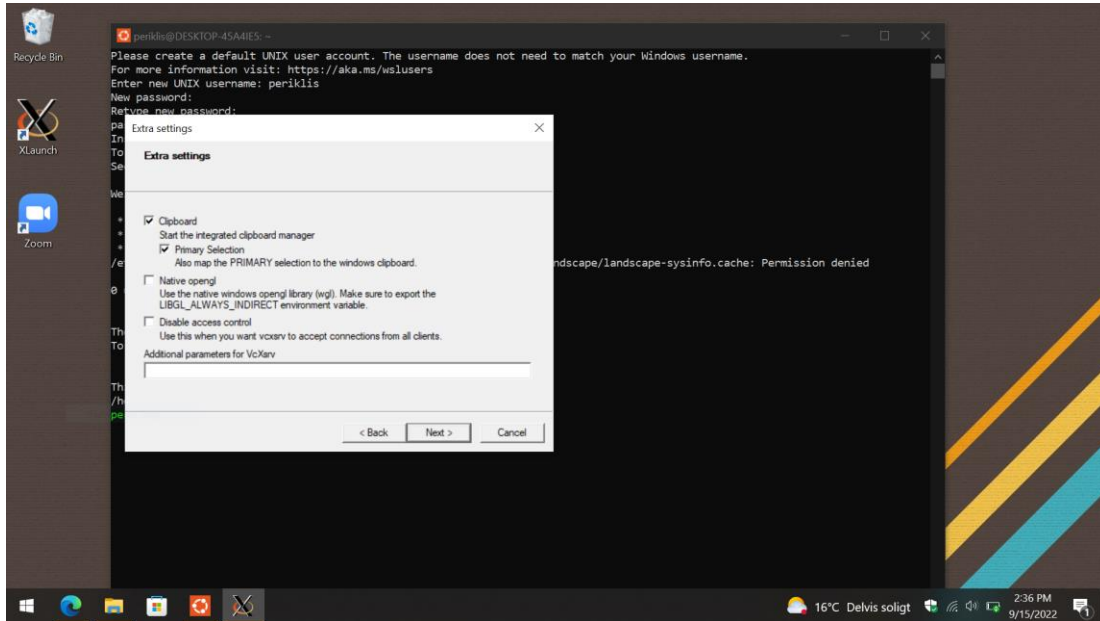
Download, install and configure [VcXsrv Windows X Server download | SourceForge.net](#)

Installing SaVi in Windows

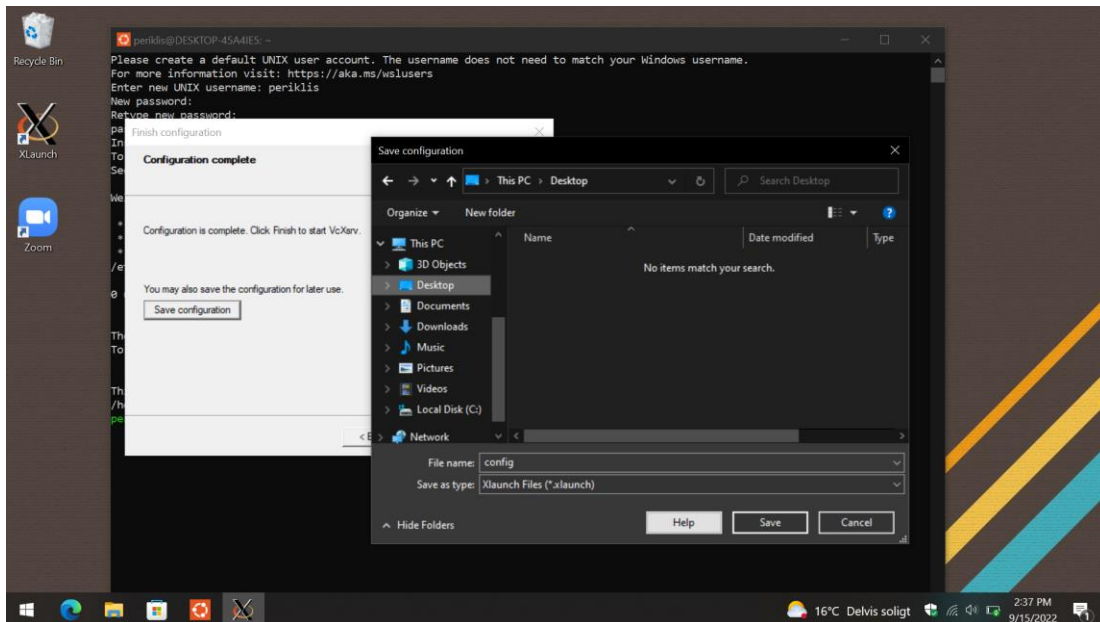
After installing, run XLaunch for the first time and uncheck (if not already unchecked)

Native opengl

Disable access control

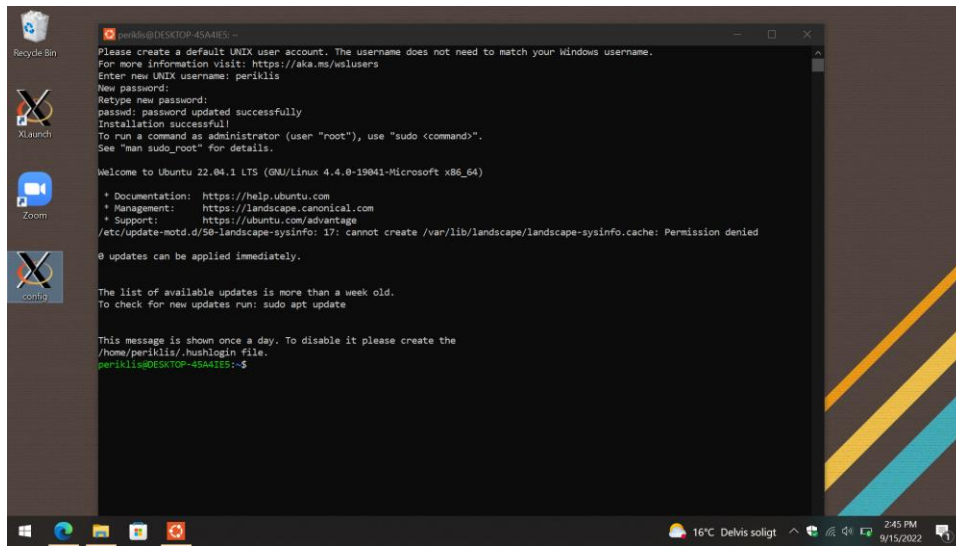


Then click **Save configuration** in a new file at the desktop



Installing SaVi in Windows

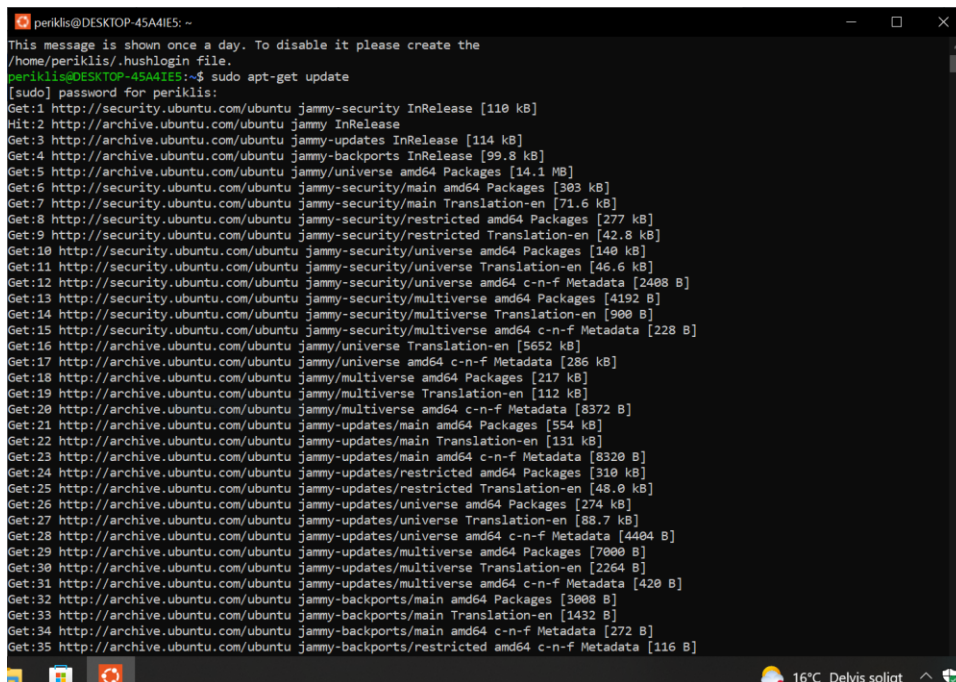
Whenever you want to launch the X window server, you should double-click on that file



Step 4: Run a set of commands to install SaVi + geomview

In the ubuntu app environment run

- **sudo apt-get update**
- **sudo apt-get install savi**
- **sudo apt-get install geomview**



Installing SaVi in Windows

```
periklis@DESKTOP-45A4IE5: ~  
Get:30 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [2264 B]  
Get:31 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [420 B]  
Get:32 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [3008 B]  
Get:33 http://archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [1432 B]  
Get:34 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [272 B]  
Get:35 http://archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]  
Get:36 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [6752 B]  
Get:37 http://archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [9216 B]  
Get:38 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [352 B]  
Get:39 http://archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]  
Fetched 23.0 MB in 36s (641 kB/s)  
Reading package lists... Done  
periklis@DESKTOP-45A4IE5:~$ sudo apt-get install savi  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  fontconfig-config fonts-dejavu-core libfontconfig1 libtk8.6 libxft2 libxrender1 libxss1 x11-common  
Suggested packages:  
  tk8.6-geomview  
The following NEW packages will be installed:  
  fontconfig-config fonts-dejavu-core libfontconfig1 libtk8.6 libxft2 libxrender1 libxss1 savi x11-common  
0 upgraded, 9 newly installed, 0 to remove and 33 not upgraded.  
Need to get 2846 kB of archives.  
After this operation, 8753 kB of additional disk space will be used.  
Do you want to continue? [Y/n] Y  
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 fonts-dejavu-core all 2.37-2build1 [1041 kB]  
Get:2 http://archive.ubuntu.com/ubuntu jammy/main amd64 fontconfig-config all 2.13.1-4.2ubuntu5 [29.1 kB]  
Get:3 http://archive.ubuntu.com/ubuntu jammy/main amd64 libfontconfig1 amd64 2.13.1-4.2ubuntu5 [131 kB]  
Get:4 http://archive.ubuntu.com/ubuntu jammy/main amd64 libxrender1 amd64 1:0.9.10-1build4 [19.7 kB]  
Get:5 http://archive.ubuntu.com/ubuntu jammy/main amd64 libxft2 amd64 2.3.4-1 [41.8 kB]  
Get:6 http://archive.ubuntu.com/ubuntu jammy/main amd64 x11-common all 1:7.7+23ubuntu2 [23.4 kB]  
Get:7 http://archive.ubuntu.com/ubuntu jammy/main amd64 libxss1 amd64 1:1.2.3-1build2 [8476 B]  
Get:8 http://archive.ubuntu.com/ubuntu jammy/main amd64 libtk8.6 amd64 8.6.12-1build1 [784 kB]  
Get:9 http://archive.ubuntu.com/ubuntu jammy/universe amd64 savi amd64 1.5.1-4 [767 kB]  
Fetched 2846 kB in 2s (1152 kB/s)  
Selecting previously unselected package fonts-dejavu-core.  
(Reading database ... 33876 files and directories currently installed.)  
Preparing to unpack .../0-Fonts-dejavu-core_2.37-2build1_all.deb ...
```

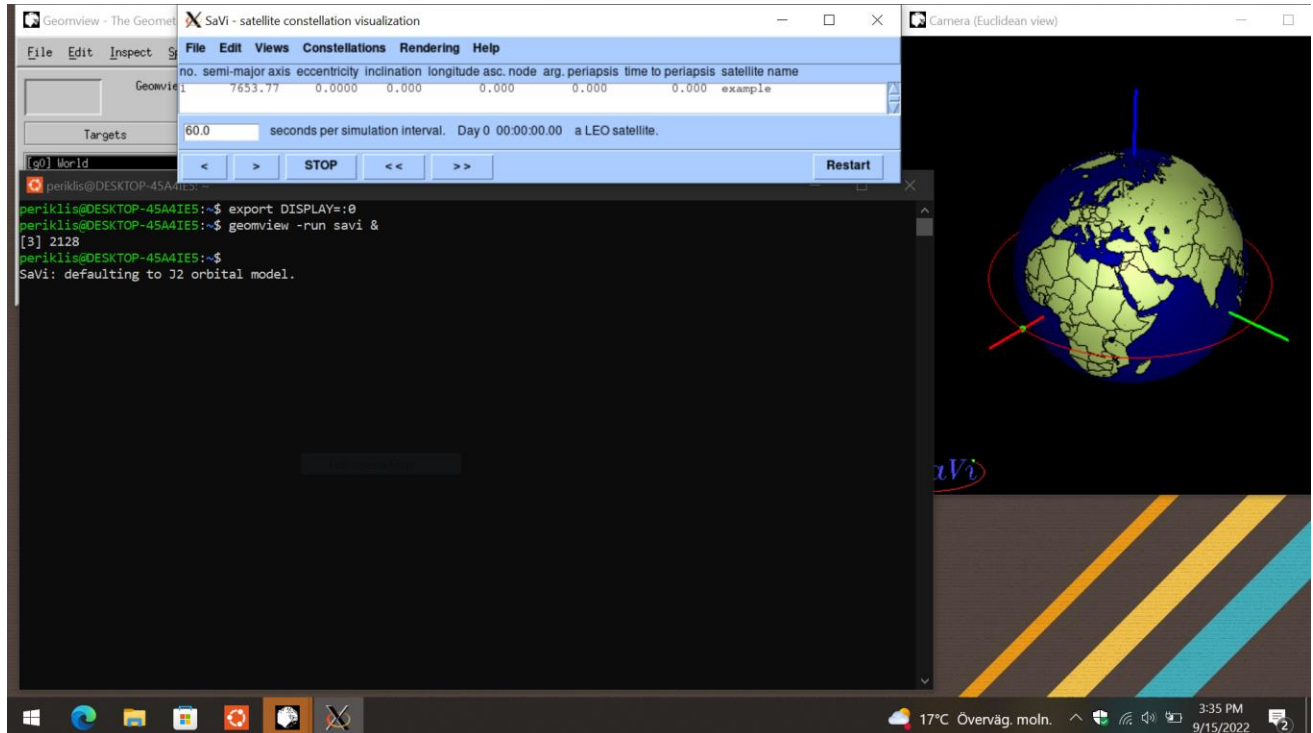
```
periklis@DESKTOP-45A4IE5: ~  
No containers need to be restarted.  
  
User sessions running outdated binaries:  
periklis @ /dev/tty1: bash[49]  
root @ /dev/pts/0: sh[572]  
root @ /dev/tty1: init[48]  
  
No VM guests are running outdated hypervisor (qemu) binaries on this host.  
periklis@DESKTOP-45A4IE5:~$ sudo apt-get install geomview  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
The following additional packages will be installed:  
  adwaita-icon-theme aspell aspell-en at-spi2-core bubblewrap dconf-gsettings-backend dconf-service dictionaries-common  
  emacsen-common enchant-2 evince evince-common fontconfig fonts-droid-fallback fonts-noto-mono fonts-urw-base35  
  gnome-desktop3-data gsettings-desktop-schemas gstreamer1.0-plugins-base gtk-update-icon-cache hicolor-icon-theme  
  humanity-icon-theme hunspell-en-us libaspell15 libatk-bridge2.0-0 libatk1.0-0 libatk1.0-data libatspi2.0-0 libavahi-client3  
  libavahi-common-data libavahi-common3 libcairo-gobject2 libcairo2 libcdparanoia0 libcolord2 libcups2 libdatrie1 libdcconf1  
  libdeflate0 libdjvulibre-text libdjvulibre21 libdrm-amdgpu1 libdrm-intel1 libdrm-nouveau2 libdrm-radeon1 libench-2-2  
  libepoxy0 libevdev2 libfontconfig1 libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev  
  libgl1 libgl1-amdgpu1 libgl1-mesa-dri libglapi-mesa libglu1-mesa libglvnd0 libglx-mesa0 libglx0 libgnome-desktop-3-19  
  libgraphite2-3 libgs9 libgs9-common libgssapi-ldap-2-2 libgssapi-ldap-2-2-common libgstreamer-plugins-base1.0-0 libgtk-3-0 libgtk-3-bin  
  libgtk-3-common libgtk3-0 libhandy-1-0 libharfbuzz0b libhunspell-1.7-0 libice6 libidn2 libijs-0.35 libjbig0 libjbig2dec0  
  libjpeg-turbo8 libjpeg8 libkpathsea6 liblcms2-2 liblvm2 libmotif-common libnautilus-extension1a libogg0 libopengl0  
  libopenjp2-2 libopus0 liborc-0.4-0 libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpaper-utils libpaper1  
  libpciaccess0 libpixman-1-0 libpoppler-glib8 libpoppler118 librsync2-2 librsync2-common libsecret-1-0 libsecret-common  
  libsensors-config libsensors5 libsm6 libspectre1 libsynctex2 libthai-data libthai0 libtheora0 libtiff5 libvisual-0.4-0  
  libvorbis9a libvorbisenc2 libvulkan1 libwayland-client0 libwayland-cursor0 libwayland-egl1 libwebp7 libx11-xcb1 libxcb-dri2-0  
  libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-randr0 libxcb-render0 libxcb-render0 libxcb-shm0 libxcb-sync1 libxcb-xfixes0 libxcomposite1  
  libxcursor1 libxdamage1 libxfixes3 libxi6 libxinerama1 libxkbcommon0 libxkbregistry0 libxm4 libxm6 libxrandr2 libxshmfence1  
  libxt6 libxtst6 libxxf86vm1 mesa-vulkan-drivers poppler-data session-migration ubuntu-mono  
Suggested packages:  
  aspell-doc spellutils wordlist gvfs nautilus-sendto unrar fonts-noto fonts-freefont-otf | fonts-freefont-ttf fonts-texgyre  
  hunspell openoffice.org-hunspell | openoffice.org-core colord cups-common libench-2-voikko libvisual-0.4-plugins  
  liblcms2-utils opus-tools librsync2-bin lm-sensors poppler-utils ghostscript fonts-japanese-mincho | fonts-ipafont-mincho  
  fonts-japanese-gothic | fonts-ipafont-gothic fonts-arphic-ukai fonts-arphic-uming fonts-nanum  
The following NEW packages will be installed:  
  adwaita-icon-theme aspell aspell-en at-spi2-core bubblewrap dconf-gsettings-backend dconf-service dictionaries-common  
  emacsen-common enchant-2 evince evince-common fontconfig fonts-droid-fallback fonts-noto-mono fonts-urw-base35 geomview
```


Installing SaVi in Windows

Step 5: Run SaVi through the Ubuntu app

Whenever you want to run SaVi you should

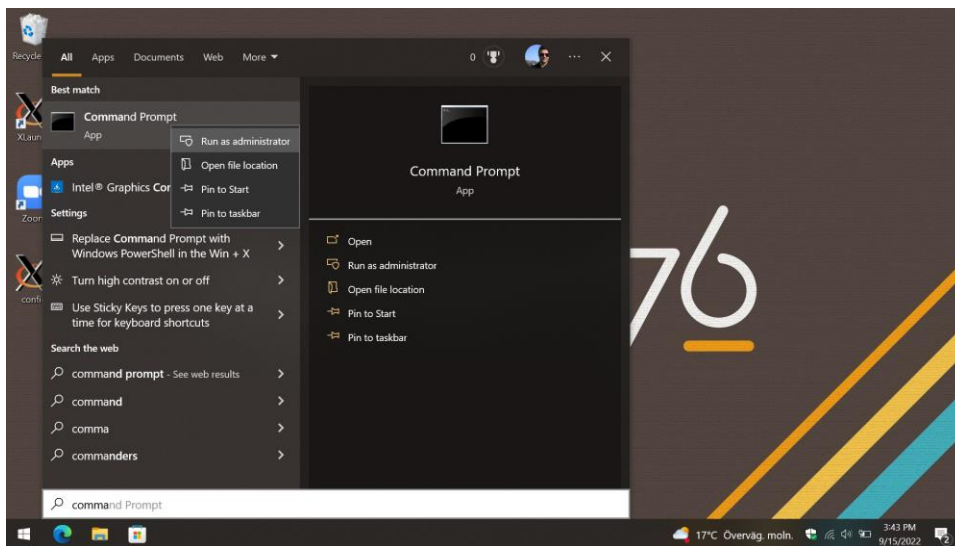
- Launch the X window server as described above
- Open the Ubuntu app and run **export DISPLAY=:0** and **geomview --run savi &**



Troubleshooting:

If the texture of the globe is not recognized and you get the “1: gzip: Exec format error” along with other warnings when you launch savi, and want to correct it you should go through the following procedure.

- **Open the Windows Command prompt as Administrator**



- **Run the `wsl --update` and `wsl --shutdown` commands and close the window**

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19044.1889]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>wsl --update
Checking for updates...
The Windows Subsystem for Linux kernel can be manually updated with 'wsl --update', but automatic updates cannot occur due to your system settings.
To receive automatic kernel updates, please enable the Windows Update setting: 'Receive updates for other Microsoft products when you update Windows'.
For more information please visit https://aka.ms/wsl2kernel.

C:\Windows\system32>wsl --shutdown

C:\Windows\system32>
```

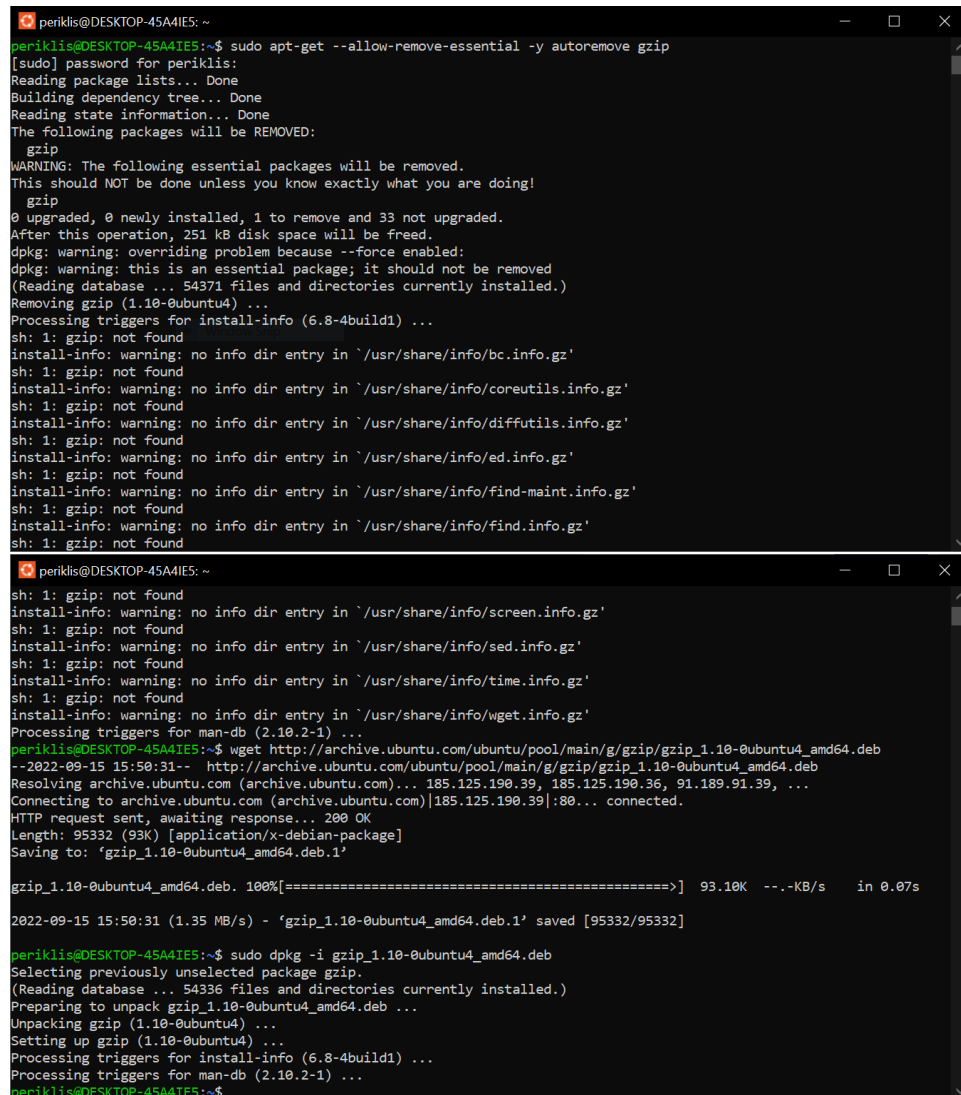
Installing SaVi in Windows

- Open the **Ubuntu app** and run the following commands

```
sudo apt-get --allow-remove-essential -y autoremove gzip
```

```
wget http://archive.ubuntu.com/ubuntu/pool/main/g/gzip/gzip_1.10-0ubuntu4_amd64.deb
```

```
sudo dpkg -i gzip_1.10-0ubuntu4.1_amd64.deb
```



```
periklis@DESKTOP-45A4IE5: ~
periklis@DESKTOP-45A4IE5:~$ sudo apt-get --allow-remove-essential -y autoremove gzip
[sudo] password for periklis:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages will be REMOVED:
  gzip
WARNING: The following essential packages will be removed.
This should NOT be done unless you know exactly what you are doing!
  gzip
0 upgraded, 0 newly installed, 1 to remove and 33 not upgraded.
After this operation, 251 kB disk space will be freed.
dpkg: warning: overriding problem because --force enabled:
dpkg: warning: this is an essential package; it should not be removed
(Reading database ... 54371 files and directories currently installed.)
Removing gzip (1.10-0ubuntu4) ...
Processing triggers for install-info (6.8-4build1) ...
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/bc.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/coreutils.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/diffutils.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/ed.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/find-maint.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/find.info.gz'
sh: 1: gzip: not found

periklis@DESKTOP-45A4IE5: ~
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/screen.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/sed.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/time.info.gz'
sh: 1: gzip: not found
install-info: warning: no info dir entry in `/usr/share/info/wget.info.gz'
Processing triggers for man-db (2.10.2-1) ...
periklis@DESKTOP-45A4IE5:~$ wget http://archive.ubuntu.com/ubuntu/pool/main/g/gzip/gzip_1.10-0ubuntu4_amd64.deb
--2022-09-15 15:50:31--  http://archive.ubuntu.com/ubuntu/pool/main/g/gzip/gzip_1.10-0ubuntu4_amd64.deb
Resolving archive.ubuntu.com (archive.ubuntu.com)... 185.125.190.39, 185.125.190.36, 91.189.91.39, ...
Connecting to archive.ubuntu.com (archive.ubuntu.com)|185.125.190.39|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95332 (93K) [application/x-debian-package]
Saving to: 'gzip_1.10-0ubuntu4_amd64.deb.1'

gzip_1.10-0ubuntu4_amd64.deb.1 100%[=====] 93.10K  --.-KB/s  in 0.07s

2022-09-15 15:50:31 (1.35 MB/s) - 'gzip_1.10-0ubuntu4_amd64.deb.1' saved [95332/95332]

periklis@DESKTOP-45A4IE5:~$ sudo dpkg -i gzip_1.10-0ubuntu4_amd64.deb
Selecting previously unselected package gzip.
(Reading database ... 54336 files and directories currently installed.)
Preparing to unpack gzip_1.10-0ubuntu4_amd64.deb ...
Unpacking gzip (1.10-0ubuntu4) ...
Setting up gzip (1.10-0ubuntu4) ...
Processing triggers for install-info (6.8-4build1) ...
Processing triggers for man-db (2.10.2-1) ...
periklis@DESKTOP-45A4IE5:~$
```

Try relaunching SaVi and the errors should be corrected.