

NASA Space Apps Challenge 2025 Waterloo

Technology Setup Guide

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Tech Guide Instructions

- Texts in [blue](#) are hyperlinks.
- If you are encountering problems that are not covered in this guide, you can make a post in the [tech-helpdesk channel of our Discord server](#).

Posting Guideline

- Read the posted [technology trouble shooting guide](https://github.com/Edwardtw92/nasa-space_apps_waterloo_tech_guide/blob/main/space_app_waterloo_tech_guide.pdf).
- If possible, try reading official documentation/wiki or online forums.
- Clearly states the encountered problem and what have been attempted.
- Do not** post any sensitive/personal information.
- Provide any auxiliary information such as error message, log, etc.
- Mark the post as *resolved*.

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1 Wi-Fi

There are two Wi-Fi options, [eduroam](#) and UW's [guest Wi-Fi \(UniversityOfWaterloo\)](#). Their connection speed should be similar, one should connect to the guest Wi-Fi if having significant troubles with eduroam.

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1.1 Eduroam

SSID: eduroam

If you are a University of Waterloo student or employee, You should already have access to eduroam. If not, follow the instructions below for operating system specific instructions.

If your school or institution uses eduroam then you should automatically be connected. If not, either connect to the guest Wi-Fi, or follow the instructions below but replace username and domain with those of your school/institute.

OS List

- [Windows/macOS](#)
- [Linux](#)
- [Mobile](#)

Windows/macOS

- 1) Connect to “eduroam”.
- 2) You should be prompted to enter your “username” and “password”. The “username” is in the form of “#@uwaterloo.ca” where # is your WatIAM username. For “password”, enter your WatIAM password.
- 3) Follow whatever the instructions prompted by the system.

Linux

- 1) With your preferred *network manager*, select “eduroam” or add a new connection with **SSID** being “eduroam”.
- 2) Set the following:
 - (a) **Wi-Fi security:** “WPA & WPA2 Enterprise”
 - (b) **Authentication:** Protected EAP (PEAP)
 - (c) **Anonymous Identity:** [Leave Blank]
 - (d) **Domain:** eduroam.uwaterloo.ca
 - (e) **CA Certificate & CA certificate password:** “(None)” or [check the “No CA certificate is re-

- quired"box]
- (f) **PEAP version:** Automatic
- (g) **Inner Authentication:** MSCHAPv2
- (h) **Username:** username@uwaterloo.ca
- (i) **Password:** WatIAM password
- 3) After saving, connect to the network.

Mobile Devices

- For Apple devices, follow the above instruction for [Windows/macOS](#).
- For Android devices, set the following:
 - (a) **Identity:** username@uwaterloo.ca
 - (b) **Password:** WatIAM password
 - (c) **Anonymous Identity:** username@uwaterloo.ca
 - (d) **Authentication method/EAP method:** Protected EAP/PEAP
 - (e) **Inner authentication/Phase 2 authentication:** MSCHAPv2
 - (f) **CA Certificate:** Use system certificate
 - (g) **Domain:** eduroam.uwaterloo.ca
- Save the network.

1.2 Guest Wi-Fi

SSID: UniversityOfWaterloo

Network Login Page

- 1) Connect to "UniversityOfWaterloo" then a login page should be prompted. If the login page was not prompted, see the [trouble shooting guide](#).
- 2) On the prompt login page, click "Or register for guest access".
- 3) Click "Or register for guest access".
- 4) Create account by entering your first name, last name, and email address. Click "Register" after entering the information.
- 5) An "Account Created" page should show up, click "Sign On" then accept/decline the terms and conditions upon reading.

Note: It is required to accept the terms and conditions to access the network.

Trouble Shooting

- 1) Launch your preferred *browser*, then the login page or a prompt to open the network login page should show up.
- 2) If not, enter <http://8.8.8.8/> or <http://neverssl.com/> in the URL bar.

2 Media Output

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2.1 Podium Setup

Available Cables and Ports: Ethernet, 3.5mm aux, HDMI, VGA, and power outlet. **NO USB-C!** **Note:** We highly recommend you to bring your own adapters and chargers.

Connecting to Podium

- 1) Connect your device to the podium via HDMI or HDMI adapter and plug in the 3.5mm audio jack.
- 2) Follow one of the below subsections for operating system dependent setup of [video](#) and [audio](#) output.
- 3) On the podium tablet:
 - (a) Select one of the display mode for the monitor (left, right, both projectors, or mic only).
 - (b) At the bottom of the screen, scroll to *laptop* and choose the desired mode again.

Note: If you would like to use a microphone during your pitch, please ask one of the volunteers for it.

2.2 Video Output

OS List

- [Windows](#)
- [macOS](#)
- [Linux](#)
 - * [DE](#)
 - * [TWM](#)

Windows

- 1) Press `Win + P` to open the *display settings*.
- 2) If the connected display is not listed, click “detect”.
- 3) When selected a display, use button next to “identify” to duplicate (mirror) or extend the display.

macOS

- 1) From *System Preference*, go to *Display*.
- 2) Arrange the displays and choose mirroring or extend the display.

Linux

Note: The following instructions assumes X11, if using Wayland please refer to documentation and forum posts.

DE: Gnome, KDE, etc.

- 1) Go to the display setting of your DE.
- 2) Arrange the displays and choose mirroring or extend the display.
- 3) If extending, set the display orientation and location.

TWM: i3, BSPWM, DWM, etc.

Recommended software: [ARandR](#)

- 1) Open *ARandR*.
- 2) From the *Output* drop-down of the menu bar, makes sure that the connected monitor is active.
- 3) From the set the orientation and relative location of the displays.

Note: If mirroring, overlay the two monitors but might not work well if the resolution/ratio aren't compatible.

If you choose to use another software, follow their documentation. Alternatively, read the [ArchWiki article on xrandr](#).

2.3 Audio Output

OS List

- [Windows](#)
- [macOS](#)
- [Linux](#)
 - * [DE](#)
 - * [TWM](#)

Windows

- 1) From the bottom right of the *task bar*, select the audio icon.
- 2) Change the audio output device and adjust the volume.

macOS

- 1) From *System Preference* go to *Sound*.
- 2) Select the audio output device and adjust the volume.

Linux

DE: Gnome, KDE, etc.

- 1) Go to the audio settings of your DE.
- 2) Select the audio output device and adjust the volume.

TWM: i3, BSPWM, DWM, etc.

Recommended Software: [pipewire](#)/[pulseaudio](#) along with [pavucontrol](#).

- 1) From *pavucontrol* set the output device and adjust audio.
- 2) Select the audio output device and adjust the volume.

For more options and documentation, read the [ArchWiki article on sound systems](#).