# ImageJ and Python introductory programming sessions at Cellesce

# **-Windows Users**

# Setup

Please install all the below software before attending the course. You will need all this software to take part in the course. The instructions below are for Windows 10 and 11 users only, please see the instructions for Mac users if you are running an apple computer. The setup should work for windows 10 and 11, bu we have not been able to test it on PC’s running Windows 11 yet.

We will be doing work in small teams (2-3). Please pair up with someone, if you are struggling to download the programs or do not have access to a suitable laptop.

# Objectives

To ensure everybody arrives at the course with the right software packages installed and to safe time.

## **GitHub**

GitHub is a code hosting platform for version control and collaboration used by developers. It allows access and collaboration on a project from anywhere though the cloud. During the course, we will be introducing GitHub, learn how to perform simple tasks and access example codes.

* Go to [GitHub: Where the world builds software · GitHub](https://github.com/) and create an account following the instructions on screen
* Please send the e-mail address linked to your GitHub account to Belddyn (Joseph Williams [WilliamsJM14@cardiff.ac.uk](mailto:WilliamsJM14@cardiff.ac.uk)) before the start of the 1st session so that he can add you to the Cellesce GitHub account

## **Ubuntu** setup

Ubuntu is an open source, beginner friendly Linux distribution, that allows easy use of cross platform applications on Windows machines. It can be used to interact with Docker containers and GitHub. On Mac computers the Terminal allows similar operations.

* From Microsoft store (<https://aka.ms/wslstore>) Download and install **Ubuntu** ([Ubuntu 22.04 LTS](https://www.microsoft.com/store/apps/9PN20MSR04DW))
* Open Ubuntu
* Create a username and password as prompted
* In Ubuntu enter:

sudo apt update

enter new password when prompted

* In Ubuntu enter:

sudo apt install docker.io

pressing y when prompted

## **DockerHub**

Docker is an open-source platform for building, deploying, and managing containerized applications. The purpose of containerization is to provide a secure, reliable, and lightweight environment for applications that is consistent from host to host. We will be using a Docker container to introduce everyone to the concept.

* Go to <https://hub.docker.com/> and set up a free account
* Download and install Docker for Mac or Windows following the instructions
* Additional steps for **Windows** (Windows10):
  + When opening Docker you will be prompted to download the latest WLS2
  + Open PowerShell **as Administrator**

**(Start menu > PowerShell > right-click > Run as Administrator)**

* + In PowerShell Enter:

dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart

* + In PowerShell Enter:

dism.exe /online /enable-feature/featurename:VirtualMachinePlatform /all /norestart

* + Download and install: <https://wslstorestorage.blob.core.windows.net/wslblob/wsl_update_x64.msi>
  + In PowerShell Enter:

wsl --set-default-version 2

* + Restart Computer

### **Example Data and Scripts**

Download the Example\_data folder and the Macro folder in a file called Workshop\_Data on your Desktop