Mini-Lab 1

Software Installation Guide

UCLA MECH&AE C163C/C263C

1 - Dynamixel Wizard

Dynamixel Wizard (Version 2) is a utility software for interacting with Dynamixel motors. Dynamixel Wizard is required for this lab, so please install it from the website link available on the Bruin Learn page for Mini-Lab 1 or from this [website link](#).
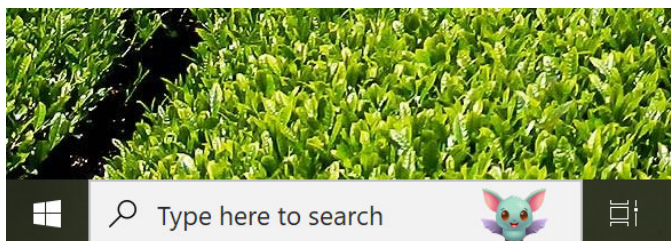
2 - Software Prerequisites

Due to Development Containers not being able to easily interact with hardware, all Mini-Labs will require local installations of Python 3.10 or higher.

Computers running macOS and Linux (Ubuntu), come bundled with this software already. In turn, **you may skip to Section 3 if using either of these operating systems**. However, computers running Windows 10 or 11 will require installation of Python 3.10 through the Microsoft Store. In turn, please follow the steps below.

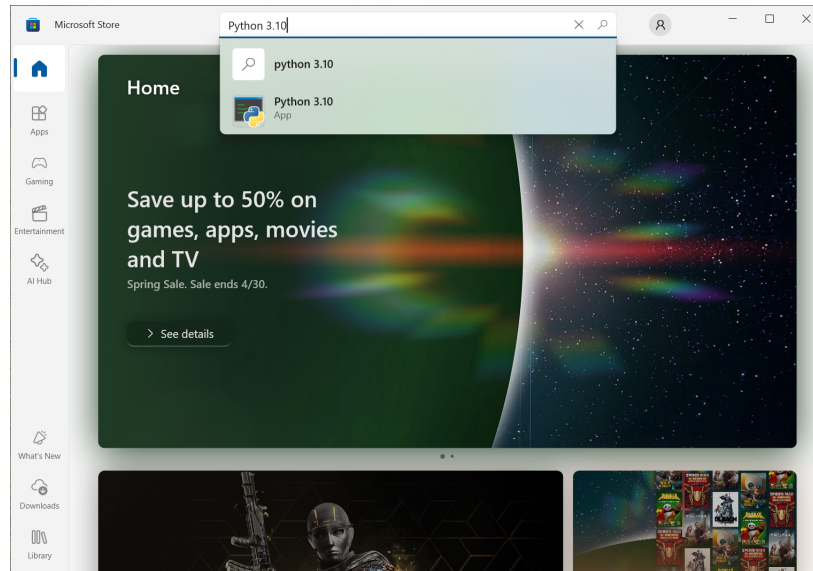## 2.1 - Windows 10/11 Python 3.10 Installation

2.1.1 - Open Microsoft Store

Type "Microsoft Store" in the Windows search bar of the Windows Taskbar and select the option "Microsoft Store" that shows up.
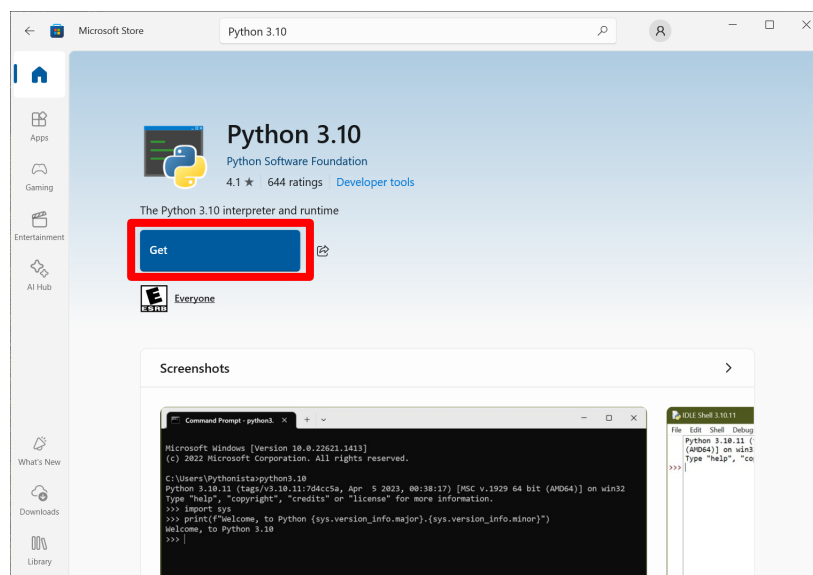
2.1.2 - Search for Python 3.10 in Microsoft Store

As shown below, search for "Python 3.10" in the Microsoft Store search bar.

2.1.2 - Install Python 3.10

Press the "Get" button on the Python 3.10 Microsoft Store page to install Python 3.10. The button text will change to "Installed" when the installation is completed.

3 - Running the Mini-Lab Code

This section explains how to setup and run the `minilab1_hardware.py` file on macOS and Windows operating systems.

3.1 - macOS

To set up the Python environment for this Mini-Lab, extract the "minilab1_hardware.zip" archive file and open the contained folder in Visual Studio Code.

Next, open the integrated terminal in Visual Studio Code and run the provided `setup_macos.zsh` file with the command "`./setup_macos.zsh`"

Lastly, to run the `minilab1_hardware.py` please use the integrated terminal in Visual Studio Code and run the provided `run_macos.zsh` file with the command "`./run_macos.zsh`"

3.2 - Windows 10/11

To set up the Python environment for this Mini-Lab, extract the "minilab1_hardware.zip" archive file and open the contained folder in Visual Studio Code.

Next, open the integrated terminal in Visual Studio Code and run the provided `setup_windows.ps1` file with the command "`.\setup_windows.ps1`"

Lastly, to run the `minilab1_hardware.py` please use the integrated terminal in Visual Studio Code and run the provided `run_windows.ps1` file with the command "`.\run_windows.ps1`".