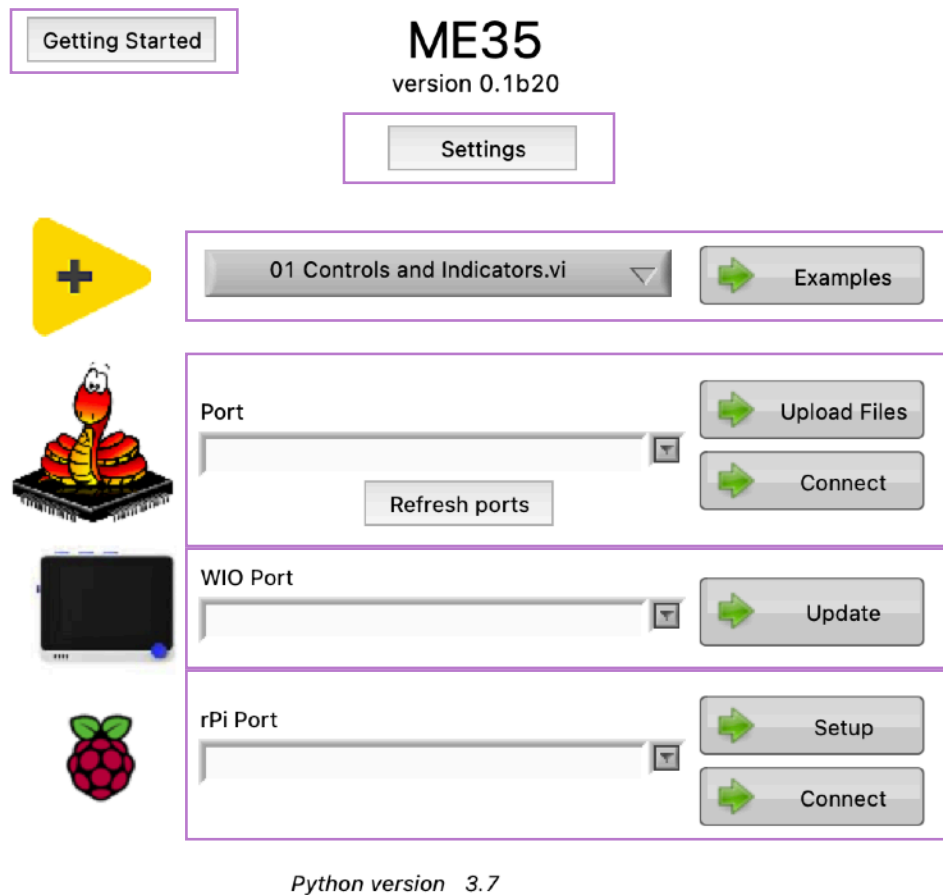


## PyVIEW

Software that lets you talk over serial to a lot of different microprocessors that I wrote for my class.

1. Installing everything properly
  1. LabVIEW
  2. Python 3.X
2. First Run
  1. Settings
  2. Connect to microprocessor
3. Learn LabVIEW

### Splash Screen



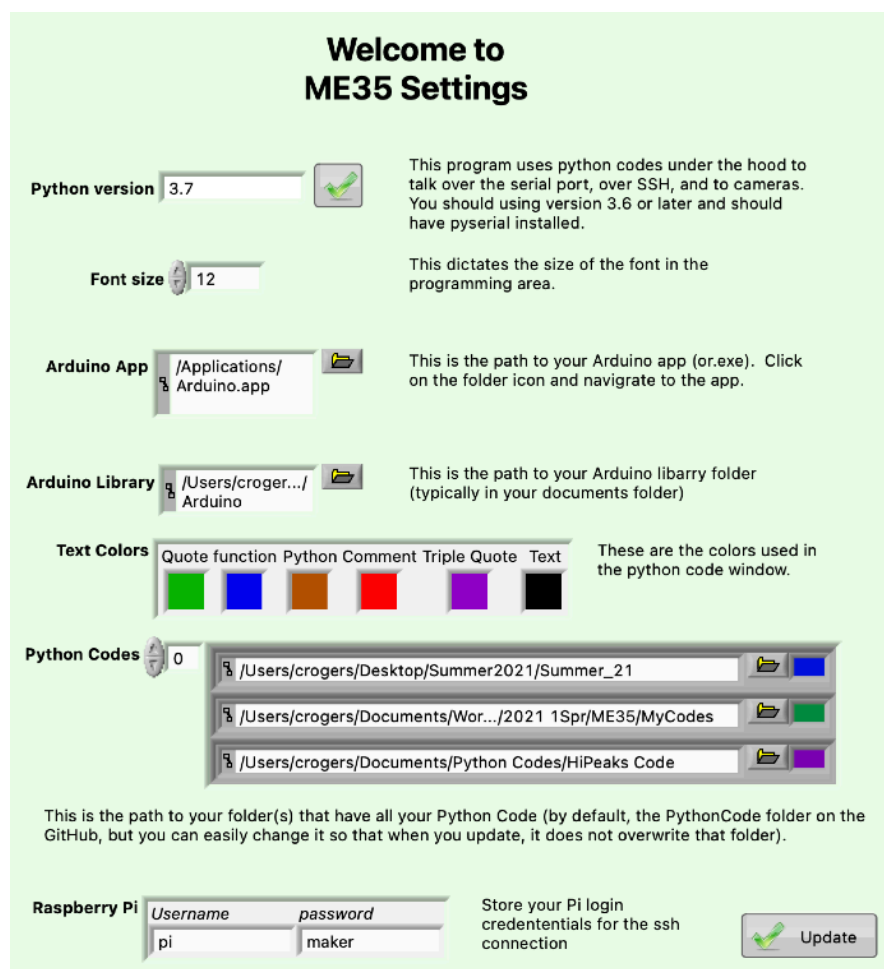
### Getting Started

This button opens up a PDF of documentation



## Settings

The settings area lets you control defaults for PyVIEW. First, make sure to enter the correct **python version** used by your computer and confirm that LabVIEW can find it with the check box. If it does not find it, try reinstalling with just the python installer - and make sure to use the correct bit depth (Mac is always 64 bit, many PC versions of LabVIEW are 32 bit - you can check by looking at the splash screen as LabVIEW starts up). **Font size** lets you vary the size of the code font and the console font in the IDE. PCs seem to prefer larger fonts. The **Arduino paths** are only if you are using the WIO. **Text colors** let you choose your favorite color pattern for the coding area. Next, the **Python codes** array is a listing of all the folders that the IDE will display in the IDE. Note that you can change the color of the text in the listing depending on which folder it comes from. Finally, if you are using ssh to connect in to your **Pi**, save the username and password here.



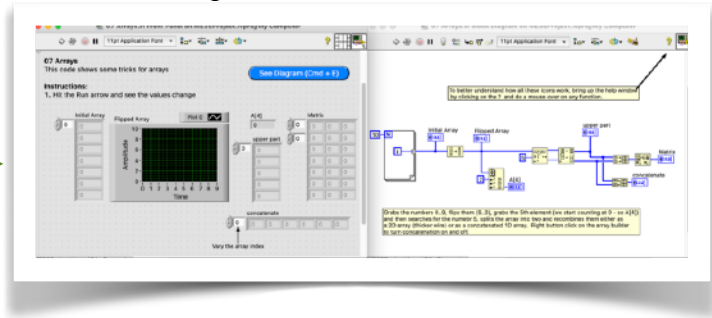
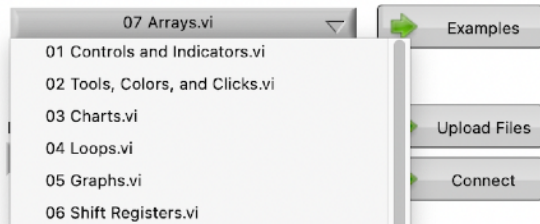
The image shows a 'Welcome to ME35 Settings' window with a light green background. It contains several configuration sections:

- Python version:** A text box with '3.7' and a green checkmark icon. A note states: 'This program uses python codes under the hood to talk over the serial port, over SSH, and to cameras. You should using version 3.6 or later and should have pyserial installed.'
- Font size:** A spinner box set to '12'. A note states: 'This dictates the size of the font in the programming area.'
- Arduino App:** A text box with '/Applications/Arduino.app' and a folder icon. A note states: 'This is the path to your Arduino app (or.exe). Click on the folder icon and navigate to the app.'
- Arduino Library:** A text box with '/Users/croger.../Arduino' and a folder icon. A note states: 'This is the path to your Arduino libarry folder (typically in your documents folder)'
- Text Colors:** A row of color swatches (green, blue, orange, red, purple, black) with labels: Quote, function, Python, Comment, Triple Quote, Text. A note states: 'These are the colors used in the python code window.'
- Python Codes:** A list box showing three folders with their respective color swatches: '/Users/crogers/Desktop/Summer2021/Summer\_21' (blue), '/Users/crogers/Documents/Wor.../2021 1Spr/ME35/MyCodes' (green), and '/Users/crogers/Documents/Python Codes/HiPeaks Code' (purple). A note states: 'This is the path to your folder(s) that have all your Python Code (by default, the PythonCode folder on the GitHub, but you can easily change it so that when you update, it does not overwrite that folder).'
- Raspberry Pi:** Two text boxes for 'Username' (containing 'pi') and 'password' (containing 'maker'). A note states: 'Store your Pi login credentials for the ssh connection'. An 'Update' button with a green checkmark is to the right.

Closing the window will revert to the last saved values, update will save the current settings.

## LabVIEW Examples

PyVIEW is written in LabVIEW with python handling all the serial and ssh communication underneath. In this way, you can edit / modify the code however you want if you know LabVIEW. Learn LabVIEW by playing with examples - this dropdown menu has a bunch of simple labVIEW code examples - simply select one and click on Examples to check it out.



## Connecting to a Micropython processor

Select your processor from the dropdown list - if it is not there, then hit refresh ports. Make sure everything is on and connected. The upload button allows you to select any file you have on your host computer and upload it to the microprocessor. The Connect button opens up the PyVIEW interface.

