

C++ for Python Users

If you are comfortable with C/C++, please feel free to move on to the next reading. If you are new to C++, we hope this introductory material will be helpful for you.

Python, the language you have been using in all of your Colabs, is a dynamically-typed, “high-level” language that is interpreted at runtime. C++ (also written Cpp), on the other hand, is a statically-typed, “low-level” language that is pre-compiled before running, allowing for very compact code.

The good news is that since we are using the Arduino platform, we won’t have to deal with much of the complications of C++ as that is taken care of for us by the many libraries and board files we will be able to leverage (more on that soon). We’ll then just have to pay attention to the changes in syntax which are more cosmetic than functional. That is, all of the main loops and conditional statements (e.g., `for`, `if else`) remain the same functionally!

In order to make sure you feel comfortable we’ve put together a set of short appendix items and have collected some other good resources to walk you through the main changes between Python and C++ for Arduino which you can find below. As you go through the course if you have good ideas for other introductory material, changes to the current material, or additional resources, please let us know and we’d be very excited to add them to the list for future learners!

For more information take a look at our [short appendix document](#) that covers:

- Data Types
- Scope, Parentheses, and Semicolons
- Functions
- Libraries, Header Files, `#include`
- Other General Syntax Points

Additional resources:

- [The C++ Language Tutor](#)
- [The Google C++ Style Guide](#)
- [The Arduino Standard Library Language Reference](#)