

Volume

1

UNIVERSITY OF SOUTH ALABAMA

RET program: Artificial Intelligence and Deep Learning

Python Installation and Setting Up Environment

RET PROGRAM: ARTIFICIAL INTELLIGENCE AND DEEP LEARNING WORKSHOP

Python Set Up

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Installing Python

In this chapter, we will download and install latest version of Python interpreter and some required modules.

Quick Tip

Any programming language is better to work with, when we have an IDE. I prefer **PyCharm** for Python, which is awesome and temporarily free for students as long as you have access to your institutional email ID.

Python programming language is free and open-source. To download, please visit the following link: <https://www.python.org/downloads/>. The version we will be using is the latest version available in the link above. I see 3.9 now. For operating systems other than windows, try to get at least version 3.5 or above.

(Usually, **apt get install python version** should work or you should compile it from the source).

Download the latest version for Windows

Download Python 3.9.5

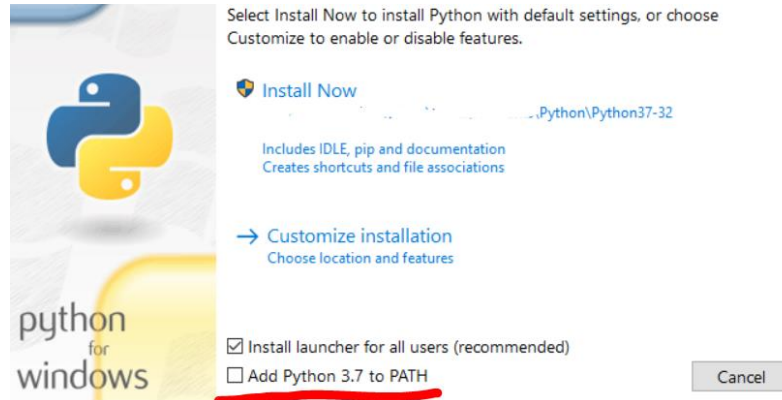
Looking for Python with a different OS? Python for [Windows](#),
[Linux/UNIX](#), [Mac OS X](#), [Other](#)

Want to help test development versions of Python? [Prereleases](#),
[Docker images](#)

Looking for Python 2.7? See below for specific releases

Click the installer

Make sure you add Python to the Path and click “**Install Now**”



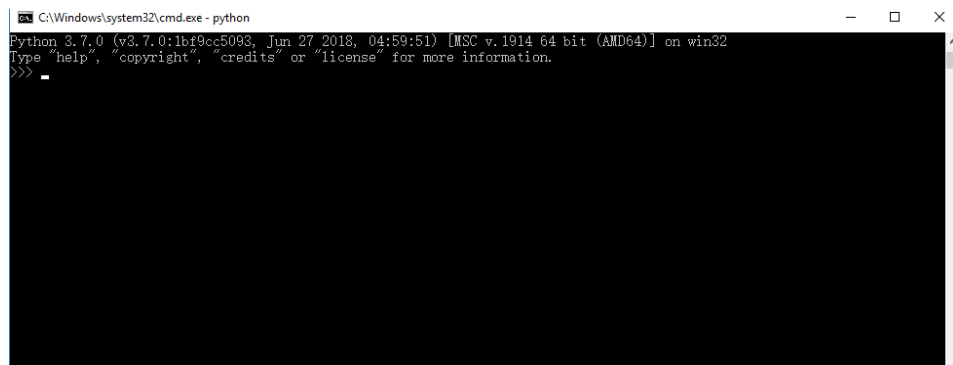
After the installation, to make sure it is installed correctly,

open the command prompt → enter “python” and click Enter.

Then you should see the Python console in your command prompt. If you get an error “python” is not recognized as an internal command, add the path to the python executable into the System Path.

Linux users: <https://realpython.com/installing-python/> Follow this article if you have any questions.

Mac Users: <https://docs.python-guide.org/starting/install3/osx/> Follow this if you get any unexpected errors.



Installing the required modules

We can't even imagine Python without its enormous number of modules or simple packages. It's actually quite easy to install modules in Python. With Python, comes its amazing module installer, the “**pip**”. Open a new command prompt window without the Python console, and enter “**pip**”. Windows users shouldn't get any error. But Linux users might because they need to install the **pip** separately.

Follow this link if you have errors with the **pip** command:
<https://www.makeuseof.com/tag/install-pip-for-python/>.

The modules we will be installing are:

1. **keras**. 2. **tensorflow** 3. **Pillow** 4. **pywin32**

keras:

Open a command prompt and enter,

```
pip install keras
```

If you get an error, just open the command prompt as an administrator. Linux users add **sudo** at the beginning of the command. **sudo pip install flask**.

tensorflow:

After **keras** is installed, run

```
pip install tensorflow
```

Pillow (user interface, and P is capital):

Now run,

```
pip install Pillow
```

Finally (also for the user interface),

```
pip install pywin32
```

*Note: **pytorch** is another module used for ML and DL tasks. Not needed for this assignment though.*

Quick Tip

From basic operations to Machine Learning algorithms, you can find almost any generic implementations of algorithms in python modules. google with the keywords, “your required functionality” “python” “module”. Just try these, “distributed computing python module”, “web development python module”. You’re Welcome.

Thank you.