

Introduction to Coding Environments for Python

Session 01

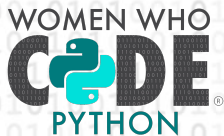
Our Mission

Inspiring women to
excel in technology
careers.



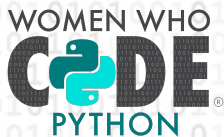
Our Vision

A world where diverse
women are better
represented as engineers
and tech leaders



Our Target

Engineers with two or more years of experience looking for support and resources to strengthen their influence and levelup in their careers.



290,000

Members

70 networks in 20 countries

122+ countries

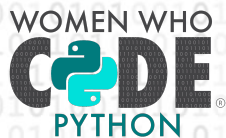
14K+ events

\$1025 daily Conference tickets

\$2M Scholarships

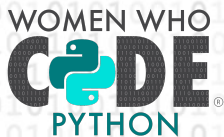
Access to [jobs](#) + [resources](#)

Infinite connections



OUR MOVEMENT

As the world changes, we
can be a connecting force
that creates a sense of
belonging while the world is
being asked to isolate.



Code of Conduct

WWCode is an inclusive community, dedicated to providing an empowering experience for everyone who participates in or supports our community, regardless of gender, gender identity and expression, sexual orientation, ability, physical appearance, body size, race, ethnicity, age, religion, socioeconomic status, caste, creed, political affiliation, or preferred programming language(s).

Our events are intended to inspire women to excel in technology careers, and anyone who is there for this purpose is welcome. We do not tolerate harassment of members in any form. Our [Code of Conduct](#) applies to all WWCode events and online communities.

Read the full version and access our incident report form at womenwhocode.com/codeofconduct

Upcoming Events

WED
02
MAR

Machine Learning Study Group Webinar Series *Featured, Recurring*

📍 Online | Data Science | 9:30 PM – 11:00 PM IST (UTC+0530)

Organized By: WWCode Data Science | WWCode Python

Register

THU
03
MAR

Webinar en Español: El maravilloso mundo de Python

📍 Online | Python | 3:30 AM – 4:30 AM IST (UTC+0530)

Organized By: WWCode Python

Register

WED
09
MAR

Shopping with Graphs! – Learn Rising Graph Database Technology for Full-Stack Flutter Application with Tigergraph – Session 1

📍 Online | Other | 5:30 AM – 6:30 AM IST (UTC+0530)

Organized By: WWCode Cloud | WWCode Data Science | WWCode Front End | WWCode Python | WWCode Mobile

Register

WED
09
MAR

🌟 Introduction to Qt: How to Create Your First Interface 🌟 *Featured, Recurring*

📍 Online | Python | 7:30 AM – 9:00 AM IST (UTC+0530)

Organized By: WWCode Python

Register

WED
09
MAR

Machine Learning Study Group Webinar Series *Featured, Recurring*

📍 Online | Data Science | 9:30 PM – 11:00 PM IST (UTC+0530)

Organized By: WWCode Data Science | WWCode Python

Register

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Register for Events and Join our community -

womenwhocode.com/python

Email - python@womenwhocode.com

Social Media: 



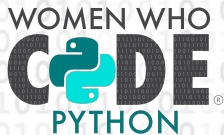
@WWCodePython



Women Who Code Python



@WWCodePython



Introduction to Coding Environments for Python

Session 1



Poojita Garg



Jessica Koubi



Nayeon

Meet your instructor:

Hi! I'm Poojita

Research Intern at Georgia Tech
Track Lead at WWCode Python

Twitter: @PoojitaGarg



Requirements for a Good Python Coding Environment

- **Save and retrieve code files :** An IDE or editor that lets you save your work and revoke everything of your code for many numbers of times.
- **Debugger the Helping-hand :** Troubleshoot your errands and highlight the lines which go wrong is really a helping hand in grief.
- **Syntax highlighting :** Identify keywords, variables, and symbols in your code make reading, writing and understanding code much better.
- **Automatic code formatting :** Indentation and formatting is a great tool for a clean code to grasp thing easier.

What Are IDE's

- IDE stands for **Integrated Development Environment**.
- IDE is a software environment that consolidates basic developer tools such as text editors, interpreters, compilers and debuggers, required to build and test software.
- IDE consolidates different aspects of a development toolchain into a single graphical user interface (GUI).
- An IDE also allows the team of developers to work on different modules of the same project in an organized manner.
- For example: VSCode, PyCharm, Eclipse, Xcode, etc.

What Are Code/Text Editors

- A text editor is simply a computer program and a tool used for text editing.
- Text editors are obviously the simpler ones; they are easy to begin with, meaning you can start using a text editor in no time.
- This is not the case when you start using an [IDE](#). But once you're used to it, you can probably write and debug the same code in less time than what it would take you with a text editor.
- Examples: Vim, Sublime Text, Atom, Brackets, etc.

Differences Between IDE's and Text Editors

IDE	Text Editor
IDE is a full fledge software environment that consolidates basic developer tools required to build and test software	It is simple tool used for editing plain text without all the bells and whistles.
It consolidates different aspects of a computer program into a single GUI	They take some input, change it and produce some output. They won't include a debugger or other parts of your toolchain.
They require more disk space, more memory and a faster processor, and probably a more robust computer	They require fewer hardware resources to run, meaning less memory, and processing power.

Using Jupyter Notebook

- A Jupyter notebook is **neither a simple text editor nor a full-featured IDE**.
- It is an **interactive computing environment** that mixes code, results of running the code in graphical form and documentation in one document.
- **Interactive computing** is a fancy term for programming where we issue commands to a running program and get results right away. Jupyter notebooks provide a quick and streamlined way for problem-solvers to prototype code and quickly share code.
- Its major use cases include **machine learning** and **data science projects**. It's a single document where you can run code, display the output, and also add explanations, formulas, charts, and make your work more transparent, understandable, repeatable, and shareable.

Install Jupyter Notebook

Jupyter Notebooks are as part of the open source [Project Jupyter](#), Jupyter Notebooks are completely free. You can download the software on its own, or as part of the [Anaconda data science toolkit](#).

It is also possible to start the dashboard on any system via the command prompt (or terminal on Unix systems) by entering the command **jupyter notebook**. In this case, the current working directory will be the start-up directory.

How to Install:

Install guides for [windows](#) and [linux](#) and [mac](#): `pip3 install jupyter`

Install Jupyter Notebook

With Jupyter Notebook open in your browser, you may notice that the URL for the dashboard is something like <https://localhost:8888/tree>. Localhost is not a website, but indicates that the content is being served from your *local* machine: **your own computer**.

>> The important point is just that although Jupyter Notebooks opens in your browser, it's being hosted and run on your local machine. Your notebooks aren't actually on the web until you decide to share them.

Let's go to the Jupyter Notebook

Using COLAB

Colaboratory, or “Colab” for short, is a **Web IDE for Python** from Google Research.

More technically, Colab is a hosted Jupyter notebook service that requires no setup to use, while providing free access to computing resources including GPUs.

Colab allows anybody to write and execute arbitrary Python code through the browser, and is especially well suited to machine learning, data analysis and education.

Let's go to the Colab

https://colab.research.google.com/drive/1PyGyURUornIbTSLF-7ex_mtQG32mtXcb?usp=sharing

Differences Between Jupyter and Colab

Jupyter	Colab
Mostly runs on your local hardware	Runs on Google Server
Uses your systems Ram, CPU, and storage and No access to external GPU and TPU	Free GPU and TPU are provided depending on your plan
You have to install library manually	Most of the required libraries are pre-installed
Can't be shared without downloading it	Can be shared with others without downloading
Runtime limits depend on your system memory	12/24 hours of Runtime and can be interrupted by Google.
Need to be installed in your computer through Anaconda or Python	No need to install anything, can be used through browser
Can't access your notebook files without your hard-drive	Can be accessed from anywhere without your hard-drive since its stored in your Google Drive
It is completely free	It is partially free, you can take a subscription

Which one should you use?

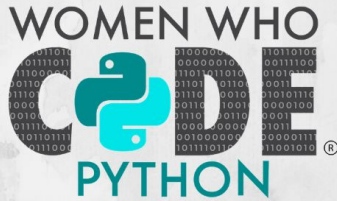
	Jupyter	Colab
Privacy	If you do normal work like learning/teaching, etc. and your work does not contain any sensitive information	Colab is also secure but not recommended for highly sensitive works
Portability	If you are okay with non portability and want to store only in your system hard-drive	If you want your files to be accessible from anywhere
Team	If you work alone and you don't have/require any collaboration	If you work with your team or colleague
Fast Processor	If you already have high end computer setup	If you don't have a high end processor or computer setup
Reliability	If your working with something which takes long execution time and you don't want any runtime limit.	If you're okay with 12/24 hours of runtime limit.
Easy to use	If you are okay with installing lots of required files in your system and your system is capable	If you don't want to install anything in your system is not capable of handling lots of required file.

Upcoming in the Series

- Session 2 on Text Editors on
18 March @ 11 PM ET
- Session 3 on IDE's on
1 April @ 8 PM ET

Q&A

Stay Connected



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@WWCODEPYTHON

WOMENWHOCODE.COM/PYTHON

- Find more resources related to this talk on github.com/WomenWhoCode/WWCodePython
- For additional questions, join our slack channel