

WELCOME

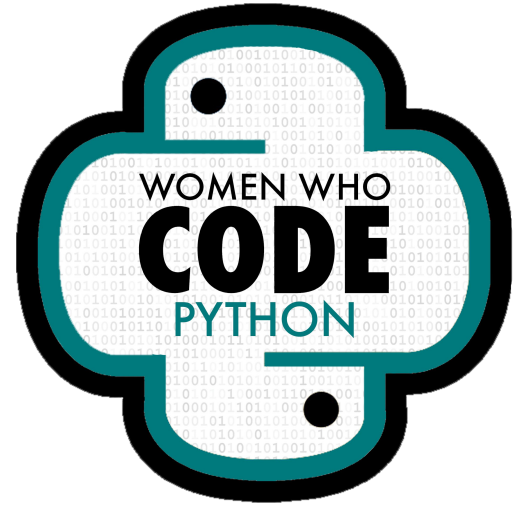
WOMEN WHO

CODE



Women Who Code Python

Python Libraries 101



OUR MISSION

Inspiring women to
excel in technology
careers.

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OUR VISION

A world where diverse women are better represented as engineers and leaders in technology.

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OUR TARGET

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

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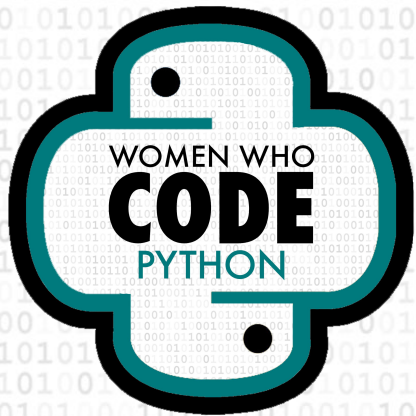
CODE OF CONDUCT

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).

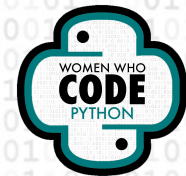
Our events are intended to inspire women to excel in technology careers, and anyone who is there for this purpose is welcome. We do not tolerate harassment of members in any form. Our **Code of Conduct** applies to all WWCode events and online communities.

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





Python Libraries 101: Numpy and Pandas





Soumya Vemuri

CSE Student



Shermaine Ang

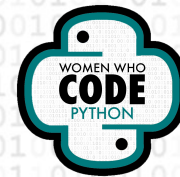
Incoming EIE Freshman at
Imperial College London



Karen Wong

Programmer at R&D
Company

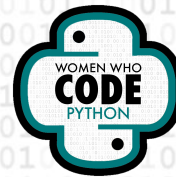
Meet Your Team!





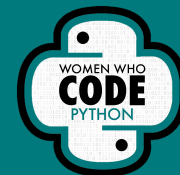
Karen Wong

Programmer at R&D Company
Lead at Women Who Code Python

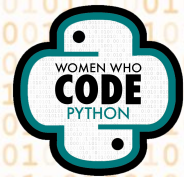


Today's Agenda

1. NumPy
 - a. Introduction to NumPy
 - b. NumPy Functions
2. Pandas
 - a. Introduction to Pandas
 - b. Pandas Functions
3. QnA
4. Let's Code!

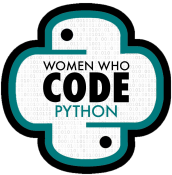


NumPy



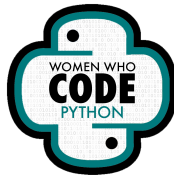
What is NumPy?

- NumPy is one of the most fundamental libraries available to handle numbers
- NumPy provides us with advanced mathematical and various other types of operations on numeric data
- Manipulating arrays, using linear algebra equations etc



NumPy Module Functions

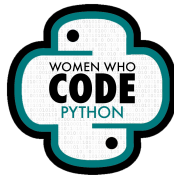
- **numpy.ones() / numpy.zeros()**
 - Return a new array of given shape and type filling with ones / zeros
- **numpy.NaN()**
 - Convert a 'null' data to a floating point data
- **numpy.inf()**
 - Convert a string or number to a floating point data
- **numpy.dot()**
 - Dot product of two arrays



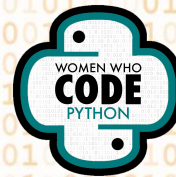
NumPy Module Functions

- **numpy.random.rand(low, high)**
 - Create an array of given shape and populate it with random samples
- **numpy.random.randint(low, high)**
 - Create random integers from lowest number to highest number
- **numpy.arange()**
 - Return s values within a given interval
- **numpy.save()**

Save an array to a binary file in '.npy' format

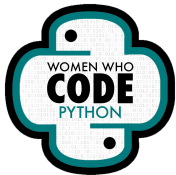


Pandas



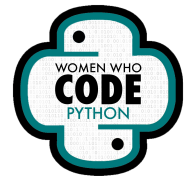
What is Pandas

- Pandas provides us with a collection of functions that help us to manipulate data (especially relational, labelled data from different types of files i.e. csv and excel spreadsheets)
- Pandas is a very powerful library to perform data analysis



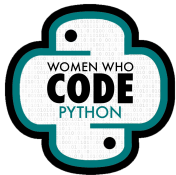
Pandas Module

- **pandas.read_csv() / pandas.read_excel()**
 - Read a csv file / excel file into DataFrame
- **pandas.DataFrame.columns()**
 - Return column labels of the DataFrame
- **pandas.DataFrame.head() / pandas.DataFrame.tail()**
 - Return the first / last n rows of the DataFrame
- **pandas.DataFrame.iloc()**
 - Indicate the location of certain values by its index

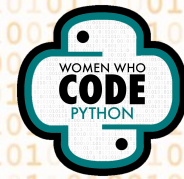


Pandas Module

- **Pandas.DataFrame.shape() / pandas.DataFrame.size()**
 - Return a tuple representing the dimensionality of the DataFrame
- **pandas.Series.unique()**
 - Return unique values of series objects
- **pandas.DataFrame.groupby()**
 - Group large amount of data and compute operations on these groups



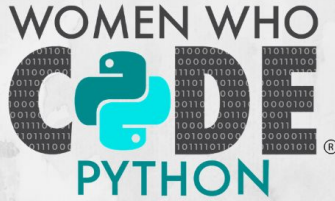
QnA Time!



Let's Code!



Stay Connected!



JOIN US ON SOCIAL MEDIA!



@WWCODEPYTHON

[WOMENWHOCODE.COM/PYTHON](https://www.womenwhocode.com/python)

Upcoming Events

- Matplotlib, seaborn, plotly
- tkinter
- Pillow



Upcoming Events

SUN
05
SEP

🌟 **Beginner Python Study Group: Colab:Guess the Number Game** 🌟 *Featured*

📍 Online | Python | 8:30 PM - 9:30 PM IST (UTC+0530)

Register

FRI
10
SEP

🌟 **Beginner Python Study Group: For Loops & While Loops** 🌟 *Featured*

📍 Online | Python | 5:30 AM - 6:30 AM IST (UTC+0530)

Register

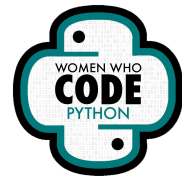
FRI
17
SEP

🌟 **Beginner Python Study Group: Functions Revisited** 🌟 *Featured*

📍 Online | Python | 5:30 AM - 6:30 AM IST (UTC+0530)

Register

Register at: <https://www.womenwhocode.com/python/events>



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Thank You for Joining!

