

Data visualization with Python

Lecturer: **Andrea Giussani**

Language

English

Course description and objectives

Visualization of analytical results is probably one of the most important aspects that people want to highlight, either in a presentation or in a report. The course covers the fundamental libraries for data visualization in Python. We will cover the basics using matplotlib, and then move to more advanced libraries to create more sophisticated plots.

Upon successful completion of this course, students should be able to:

- Translate analytical results into charts and plots
- Be familiar with matplotlib and related python libraries.

Audience

The course is targeted at:

- students who aim at improving their skills on data visualization using Python
- those who are curious on Data Visualization

However, note that the course is open to a restricted audience of Bocconi students.

More specifically, only students enrolled in:

- their third year bachelor programs, or
- any of the Bocconi Master programs, or
- any PhD or SDA programs

Prerequisites

Having passed the curricular exam in Computer Science or having a significant strong exposure to coding (especially with Python) is really recommended .

Duration

8 hours

Teaching mode

It will be possible to join the course in presence and/or in distance, by connecting remotely and following the streaming of the lesson held in the classroom.

Calendar

Lecture	Date	Time	Room	Lesson in person with groups by student ID number
1	Wed 23/09/2020	18.40 - 20.10	Info AS05	Odd
2	Thu 24/09/2020	18.40 - 20.10	Info AS05	Odd
3	Wed 30/09/2020	18.40 - 20.10	Info AS05	Even
4	Thu 01/10/2020	18.40 - 20.10	Info AS05	Even

Syllabus of the course

Lecture	Topics
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| 1 | Getting Data in Python <ul style="list-style-type: none">- What is a DataFrame?- Basic Operations with Pandas- Introduction to Matplotlib- Axes and Subplots |
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Exercise

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| 2 | Matplotlib Library <ul style="list-style-type: none">- Customization of a Plot- Annotations- Main Type of Charts |
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Exercise

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| 3 | Advanced Visualization Tools (1) <ul style="list-style-type: none">- Visualization of Categorical variables- Visualization of multivariate Distributions- Highlight data |
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Exercise

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| 4 | Advanced Visualization Tools (2) <ul style="list-style-type: none">- Statistical Analysis- Data Flow- Live graphs |
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Exercise

Software used

Python 3.5 (or greater)

Suggested bibliography

Lecture notes provided by the Instructor.

Available seats

This activity is limited to **60** participants. Registrations cannot be carried out once this number has been reached or after closing of the registration period.