Python from Zero to Data Science

Report of Contributions

Contribution ID: **1** Type: **not specified**

Introduction to Python I

Monday 3 November 2025 10:00 (1h 30m)

You will have the first contact with your Python programming tool, and together with your instructors, you will write your very first programs. This covers learning about variables and data types, and importing code from other files or libraries.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **2** Type: **not specified**

Introduction to Python III

Tuesday 4 November 2025 10:00 (1h 30m)

You will learn about “for”-loops, as well as writing and executing functions and modules.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **3** Type: **not specified**

Supervised practice I

Monday 3 November 2025 14:30 (2h 30m)

In the self-paced exercise, you can apply your new knowledge to some exercise problems. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **4** Type: **not specified**

Supervised Practice III

Tuesday 4 November 2025 14:30 (2h 30m)

You can apply your new knowledge to more complex problems designed to lead you toward creating somewhat larger and more complex programs. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **5** Type: **not specified**

Introduction to Pandas I

Monday 10 November 2025 10:00 (1h 30m)

Get to know the popular data processing framework. You will be introduced to the Series data type and pandas, including the underlying data structures.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **6** Type: **not specified**

Supervised Practice I

Monday 10 November 2025 14:30 (2h 30m)

You will generate and process a data set using pandas. In addition, you will also learn about the important concept of (pseudo-)random numbers. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **10** Type: **not specified**

First Steps in Python IV

Wednesday 5 November 2025 10:00 (1h 30m)

You will learn about collection data types, such as tuples and lists, and finalize an example project.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **15** Type: **not specified**

Introduction to Matplotlib I

Tuesday 11 November 2025 10:00 (1h 30m)

Pyplot is a collection of shortcuts for common tasks. Learn how to use it to create basic plots.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **16** Type: **not specified**

Supervised Practice II

Tuesday 11 November 2025 14:30 (2h 30m)

Get your hands on a real-live weather data set, “clean” the data, and visualize it. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **17** Type: **not specified**

Introduction to Python II

Monday 3 November 2025 12:30 (1h 30m)

Loops are a good choice when it comes to repeating actions. In this section, the “while”-loop will be introduced. Furthermore, it is often necessary to check conditions and act accordingly, for example, to check the validity of user input. You will learn about conditions and how to control and react to them.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **19** Type: **not specified**

Supervised Practice II

Tuesday 4 November 2025 12:30 (1h 30m)

You can apply your new knowledge to more complex problems designed to lead you toward creating somewhat larger and more complex programs. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **20** Type: **not specified**

Supervised Practice IV

Wednesday 5 November 2025 12:30 (1h 30m)

You have a selection of exercises available to work on that range from repetition of the content taught on the first days to complex tasks. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **21** Type: **not specified**

Supervised Practice V

Wednesday 5 November 2025 14:30 (2h 30m)

You have a selection of exercises available to work on that range from repetition of the content taught on the first days to complex tasks. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Introduction to Python

Contribution ID: **22** Type: **not specified**

Introduction to Pandas II

Monday 10 November 2025 12:30 (1h 30m)

Learn how to shape and process tabular data in a Series and a DataFrame.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **23** Type: **not specified**

Introduction to Matplotlib II

Tuesday 11 November 2025 12:30 (1h 30m)

Learn about the object-oriented style of Matplotlib, an alternative approach to setting up plots. You will also be introduced to combining pandas and Matplotlib for quick plotting.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **24** Type: **not specified**

Introduction to Matplotlib III

Wednesday 12 November 2025 10:00 (1h 30m)

You will learn about filtering data, advanced plotting, and how to combine several plots in one figure.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **25** Type: **not specified**

Supervised Practice III

Wednesday 12 November 2025 12:30 (1h 30m)

Using the weather data set, you will apply your knowledge to work on multi-step analysis and plotting tasks. The instructors are available to help you in case you have questions or want feedback.

Presenter: ERXLEBEN, Fredo (Helmholtz-Zentrum Dresden-Rossendorf)

Session Classification: Pandas and Matplotlib

Contribution ID: **26** Type: **not specified**

Supervised Practice IV

Wednesday 12 November 2025 14:30 (2h 30m)

Using the weather data set, you will apply your knowledge to work on multi-step analysis and plotting tasks. The instructors are available to help you in case you have questions or want feedback.

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Session Classification: Pandas and Matplotlib