Anaconda cloud

How to start your adventure with Python – Or how to start working on the tutorials provided

Make a free account on the Anaconda Cloud

- For this lectures only Anaconda Cloud account is necessary, so that you can do the tutorials in your browser :
- Go here: <u>https://anaconda.cloud/</u>
- Create a free account
- Log in and select Jupyter notebooks (see the next slide)

You can also follow one of the many tutorials on how to download Anaconda distribution (which allows you to run Python on your computer very easily), for instance from here: <u>http://anaconda.com/download</u>. But this is not necessary right now.



You may see this information – wait to be redirected

Your server is starting up.

You will be redirected automatically when it's ready for you.

Spawning server...

Event log

If this window will appear – you can select either option and click on

"Assign"

ssign a Runtime for Untitled.ipynb	×
anaconda-2024.02-py310	
conda-env-anaconda-2024.02-py310-py local	
anaconda-ai-2024.04-py310	
conda-env-anaconda-ai-2024.04-py310-py local	
Always start the proferred runtime	
Always start the preferred funtime	No Runtime Assign



This is how your page should look like.

To open panel on the left, where you can see your data and different notebooks with code (marked with blue arrow), click on the folder icon (in red circle)

Your code will be in the so-called cells -> first one is marked with green line Red arrow shows the title of the first notebook. All jupyter notebooks have extension ".ipynb" 🔾 File Edit View Run Kernel LaTeX Tabs Settings Help



A programming language is a set of rules describing how to construct correct expressions (i.e., like any

Programming languages are divided into two groups - scripting and compiled.

The first group is scripting languages. Programs written in this way are essentially text files, which are e compiled languages. They differ in that before we can run our code, we must compile it, i.e., translate it before the program is run. Examples include Fortran, C++, Java.

Compiler and Interpreter

- · A compiler is a program that converts source code (written in a language understood by humans;
- · An interpreter is a program that analyzes the source code of a program and executes analyzed frag

Python

Why Python?

Python stands out in the programming world due to its simplicity and readability, making it ideal for be and automation more accessible. The language's versatility extends to multiple platforms and discipline

Best way to upload new files (like the tutorials you have downloaded) is to either drag the files over the region marked with blue arrow or to click on arrow (in red circle) that allows you to upload files from specific location

Keep in mind that any files in .zip or .rar folders must be "unpacked" before upload!

First tutorial looks like this in the lecture



· Solves a Problem: The purpose of an algorithm is to solve a specific problem or perform a specific task.

They will work in the

same way

. Start and End Points: Algorithms have clear starting and stopping points. They begin with an input, or initial condition, and end when the problem is solved

And should look like this if you open it through anaconda cloud

F	ile Edit View R	un Kernel LaTe	CPU Usage O Disk Usage Kernels: 1/10 Apps: 0/1 Help Us Improve
. 1	+ 10	± C	🖸 Launcher X 🕅 Untitled.ipynb X Ministrynb X +
	Filter files by name	0	🖻 + 🛠 🖺 🗂 🕨 🗉 G 👐 Code 🗸 🛠 🚰
		~	
1			Introduction
1	Name 🔶	Last Modified	
•	🖪 Intro 1.ipynb	3 minutes ago	Basic definitions
	README.ip	3 months ago	What is programming?
	💌 Untitled.ipy	19 minutes ago	what is programming.
1	💌 zaj1.ipynb	3 months ago	Programming. often referred to as coding, is the process of designing and building an executable computer program to accomplish a specific computing result or to perform a particular task. Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of abouthows in a characterized and building and accuracy and resource consumption, and the implementation of abouthows in a characterized accuracy and resource consumption, and the implementation of abouthows in a characterized accuracy and resource consumption.
			importantion or agonuting in a crossin programming analogies control or complete report to complete real or to perform a particular tail. Programming involves tails such as analysis, generating algorithms, prolling algorithms, and the inglementation of algorithms in a closer programming language (commonly referred to a coding).
			What is alghoritm?
			An algorithm is a set of step-by-step procedures or a set of rules to be followed in calculations or other problem-solving operations, especially by a computer. Here are some key points about algorithms:
			Sequential Steps: Algorithms consist of a finite sequence of well-defined instructions. They are typically organized in a logical order, where each step is clearly outlined.
			 Colume a Derablam: The automas of an allowidhm is to radius a consider market and a consider trade

- Your code will be in the "cells"
- To run a cel (start the code) you can either use ctrl+enter or click on the triangle at the top (in yellow)
- If your cel has been "run", you will see a number in the square brackets on the left side
- If there is a star, like this [*] the cell is running
- If you need to add new cell use the "+" sign (in the circle)



There are some tasks within the code. For the Intro 1 tutorial:

- While doing the tutorial, pay special attention to tasks 9-12, 20-21, 24-27
- What is the function of the command "input"
- Note the structure of the conditional statemet "if". Where are the indents and colon?

For the Intro 2 tutorial:

- (to upload the data you can do the same as with jupyter notebooks)
- Pay special attention to the lists and functions that allow you to manipulate them (select elements, adding elements, and so on) – we will use this often!
- Be able to answer the question what are the libraries in python and how to use them; what does the "numpy" library? What does "np" mean when using this library?
- How you can open the .csv files?

For geographic data

You might not be able to install additional packages to see geographic data – you can leave this part of the tutorial

If something is not working – you can stop and start the notebook again

To do that:

- right-click on the name of the file in the file-space
- 2. Select shut down kernel
- 3. This turns off all calculations within this notebook
- 4. You can run your cells again

