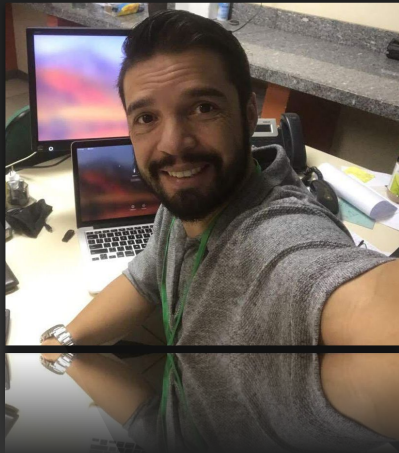


Hello, Python

**Minicurso
Semana Acadêmica
SAECA 2021**

com:
Prof. Dr. Rogério Vargas

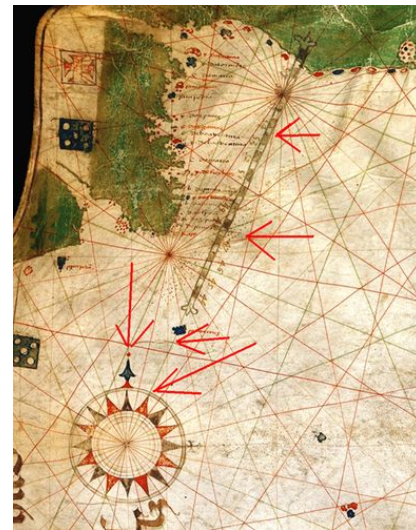


HELLO!

Eu sou prof. Dr. Rogério
Eu estou aqui para motivar
a programar na linguagem
Python.

0 minicurso

1. Roteiro
2. Linguagem de programação
3. Programação na ECA/Unipampa
4. Instalação
5. Codificação
6. Considerações finais



Participar

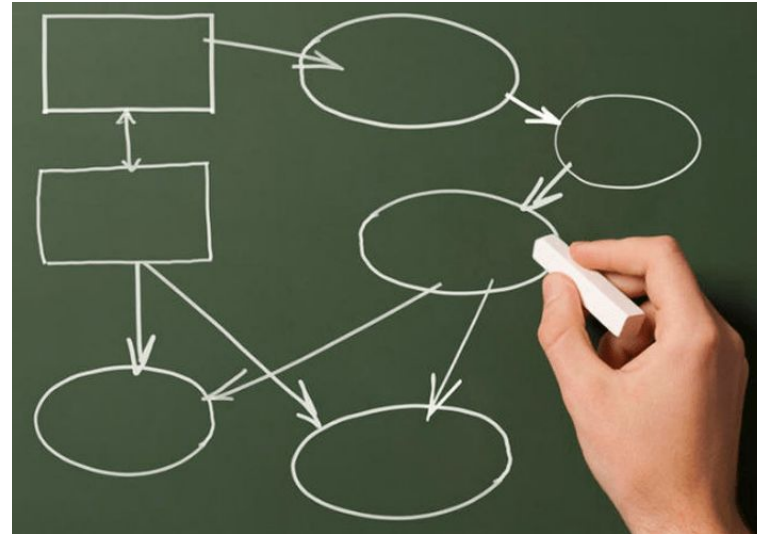
Levante a mão para participar. Sinta-se à vontade, o minicurso irá fluir melhor com sua participação.

Linguagem de Programação

O que é? Pra que serve? Como funciona?

Algoritmo

- ▶ O que é um algoritmo?
- ▶ Abrir o *Google Meet*
- ▶ Prever situações
- ▶ Fluxograma, casos de uso, português estruturado, esquema próprio...



Semântica x Sintaxe

- ▶ Semântica



- ▶ Sintaxe

```
msg ("TEXTO")
```



Linguagem de máquina

A Linguagem máquina ou código máquina é um sistema de instruções e dados codificados em código binário que podem entender os microprocessadores.





INTERPRETADOR

A linguagem Python é interpretada.

Quem usa Python?

NETFLIXJPMorganChaseYouTubepandoraBitbucketfacebookshutterstockVineyelpBank of AmericaUBERGoogleasanafreelancerUdemyredhatQuoraIBM@mailgunmoz://atwilioamazonExpediaSpotifyDISQUSSurveyMonkeyglassdoorreddithikeYAHOO!9GAGNOKIASendGridredisthe ONIONtrivagoMIT
Massachusetts
Institute of
Technology

Ranking das linguagens de programação (Mar/2021)



Mar 2021	Mar 2020	Change	Programming Language	Ratings	Change
1	2	▲	C	15.33%	-1.00%
2	1	▼	Java	10.45%	-7.33%
3	3		Python	10.31%	+0.20%
4	4		C++	6.52%	-0.27%
5	5		C#	4.97%	-0.35%
6	6		Visual Basic	4.85%	-0.40%
7	7		JavaScript	2.11%	+0.06%
8	8		PHP	2.07%	+0.05%
9	12	▲	Assembly language	1.97%	+0.72%
10	9	▼	SQL	1.87%	+0.03%
11	10	▼	Go	1.31%	+0.03%
12	18	▲	Classic Visual Basic	1.26%	+0.49%
13	11	▼	R	1.25%	-0.01%
14	20	▲	Delphi/Object Pascal	1.20%	+0.48%
15	36	▲	Groovy	1.19%	+0.94%
16	14	▼	Ruby	1.18%	+0.13%
17	17		Perl	1.15%	+0.24%

Fonte: <https://www.tiobe.com/tiobe-index/>

Agrimensura e cartografia

Programação na ECA/Unipampa

E na Engenharia de Cartografia e Agrimensura?



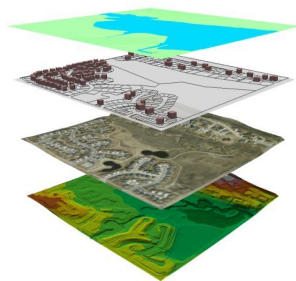
- Programação I



- Programação II

E na Engenharia de Cartografia e Agrimensura?

- ▶ Topografia
- ▶ Geodésia Física
- ▶ Geodésia Geométrica
- ▶ Geodésia Espacial
- ▶ Fotogrametria
- ▶ Ajustamento de Observações



- ▶ Cartografia
- ▶ Sensoriamento Remoto
- ▶ Geoprocessamento
- ▶ Sistemas de Informações Georreferenciadas
- ▶ Cadastro Técnico Multifinalitário

Agisoft



ArcGIS



QGIS

Instalação

Eis algumas possibilidades para usar o Python

Instalação do Interpretador

- ▶ **Windows**

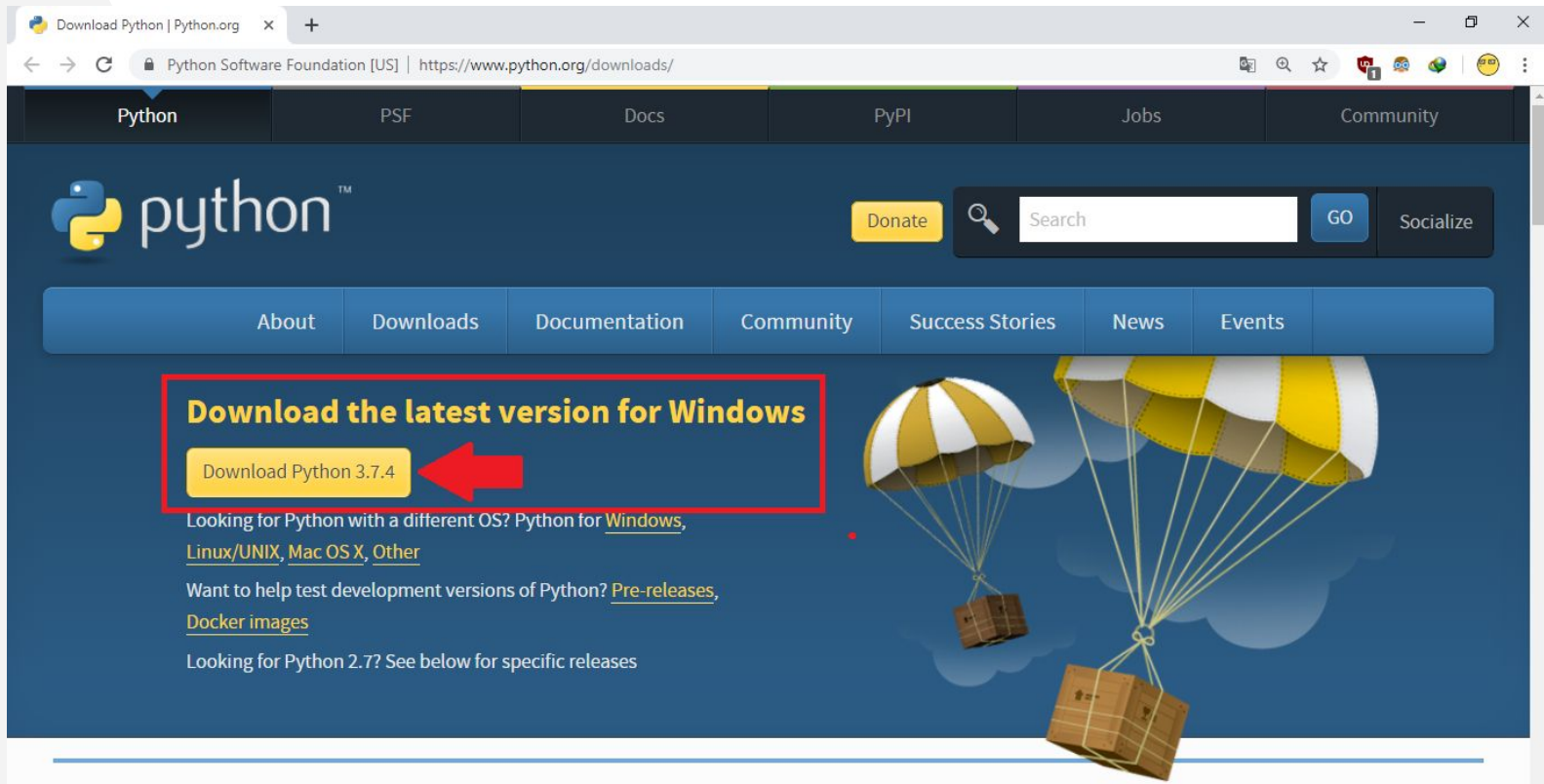
Versão mais recente: 3.9.2

- ▶ **Download**

<https://www.python.org/downloads/windows/>



Instalação: Download

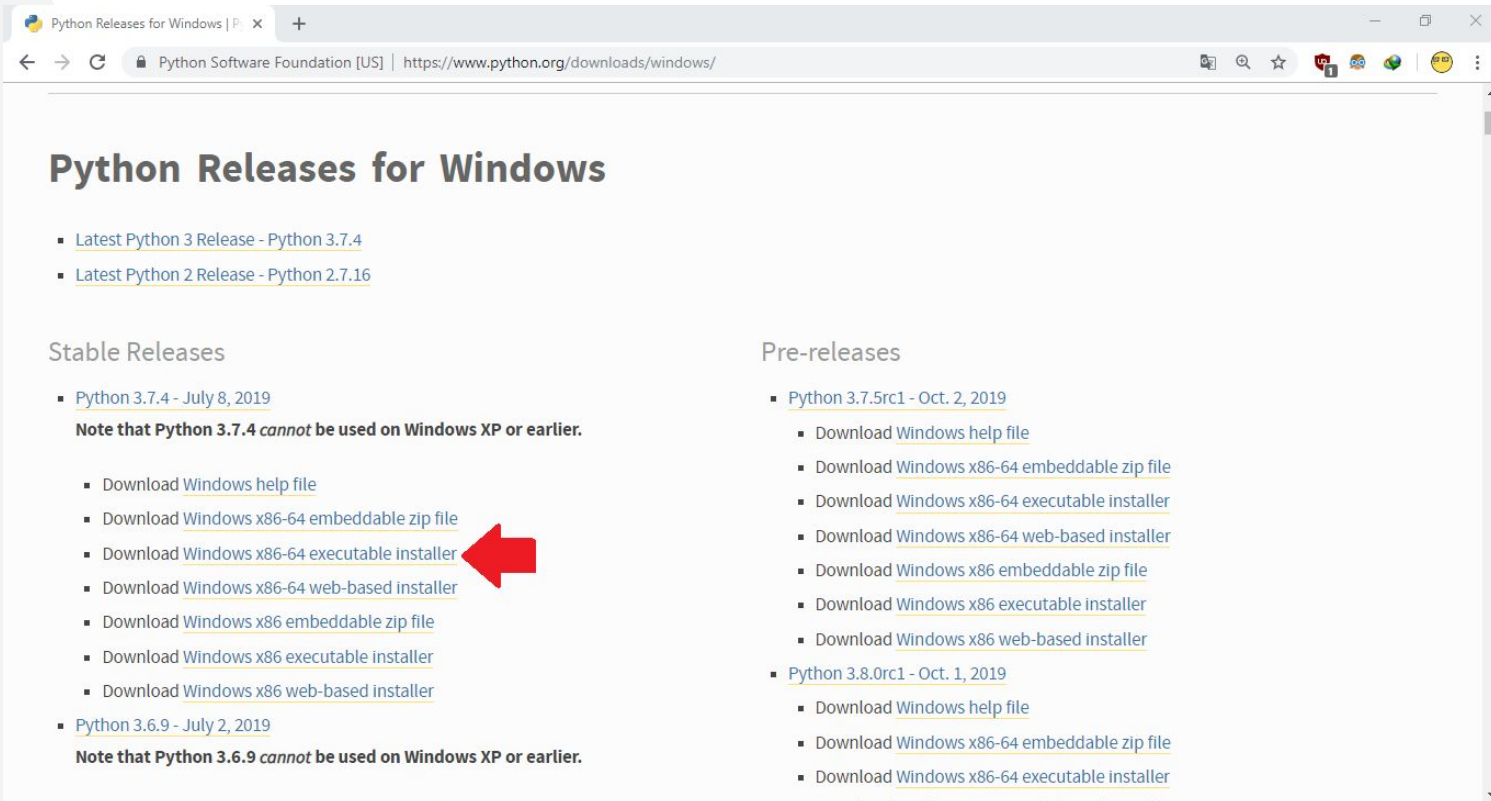


The screenshot shows the Python.org website's download page. The browser's address bar displays "Python Software Foundation [US] | https://www.python.org/downloads/". The navigation menu includes "Python", "PSF", "Docs", "PyPI", "Jobs", and "Community". The main header features the Python logo, a "Donate" button, a search bar with a "GO" button, and a "Socialize" button. Below the header is a secondary navigation bar with links for "About", "Downloads", "Documentation", "Community", "Success Stories", "News", and "Events".

The main content area is titled "Download the latest version for Windows" in bold yellow text, enclosed in a red rectangular box. Below this title is a yellow button labeled "Download Python 3.7.4", with a red arrow pointing to it from the right. Underneath the button, there are several links: "Looking for Python with a different OS? Python for [Windows](#), [Linux/UNIX](#), [Mac OS X](#), [Other](#)", "Want to help test development versions of Python? [Pre-releases](#), [Docker images](#)", and "Looking for Python 2.7? See below for specific releases".

The background of the main content area features an illustration of two parachutes with yellow and white stripes, each carrying a brown cardboard box, set against a blue sky with white clouds.

Instalação: 64 bits



Python Releases for Windows | P... x +

Python Software Foundation [US] | <https://www.python.org/downloads/windows/>

Python Releases for Windows

- [Latest Python 3 Release - Python 3.7.4](#)
- [Latest Python 2 Release - Python 2.7.16](#)

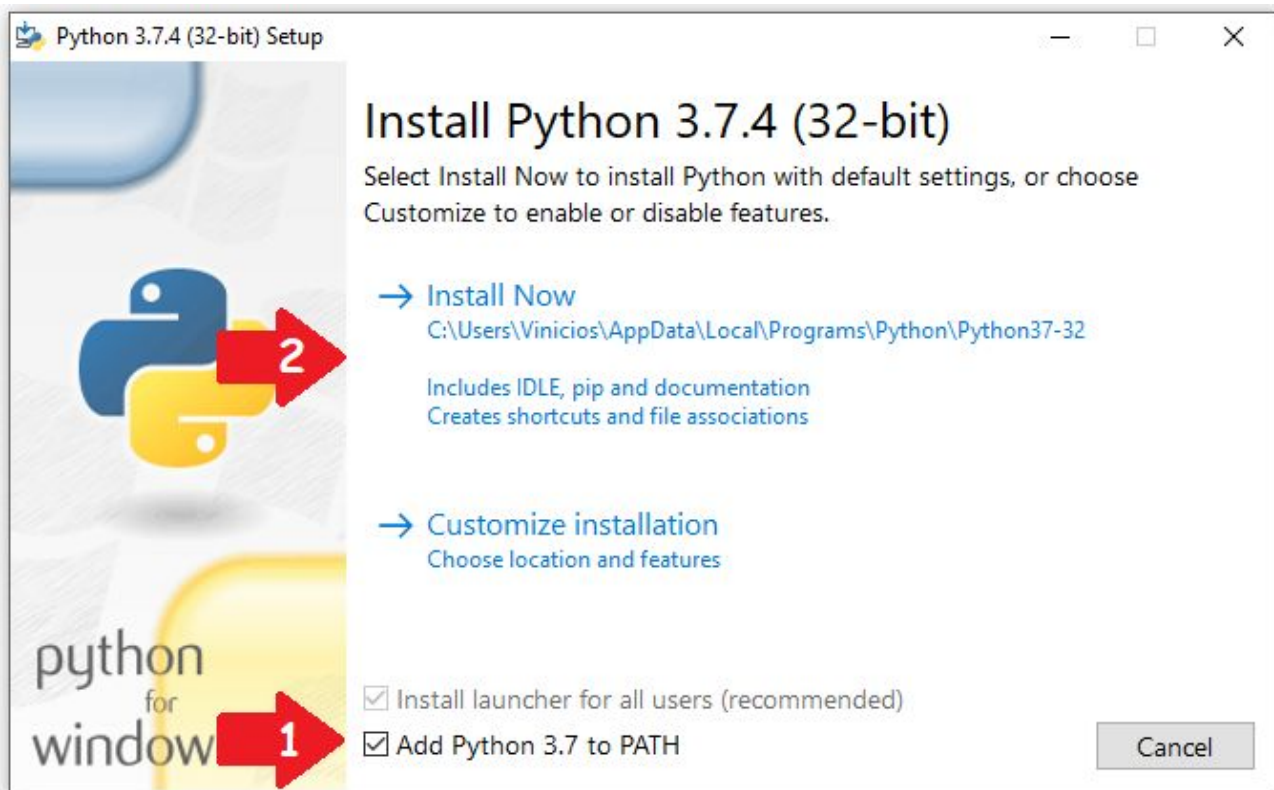
Stable Releases

- [Python 3.7.4 - July 8, 2019](#)
 - **Note that Python 3.7.4 cannot be used on Windows XP or earlier.**
 - Download [Windows help file](#)
 - Download [Windows x86-64 embeddable zip file](#)
 - Download [Windows x86-64 executable installer](#)
 - Download [Windows x86-64 web-based installer](#)
 - Download [Windows x86 embeddable zip file](#)
 - Download [Windows x86 executable installer](#)
 - Download [Windows x86 web-based installer](#)
- [Python 3.6.9 - July 2, 2019](#)
 - **Note that Python 3.6.9 cannot be used on Windows XP or earlier.**

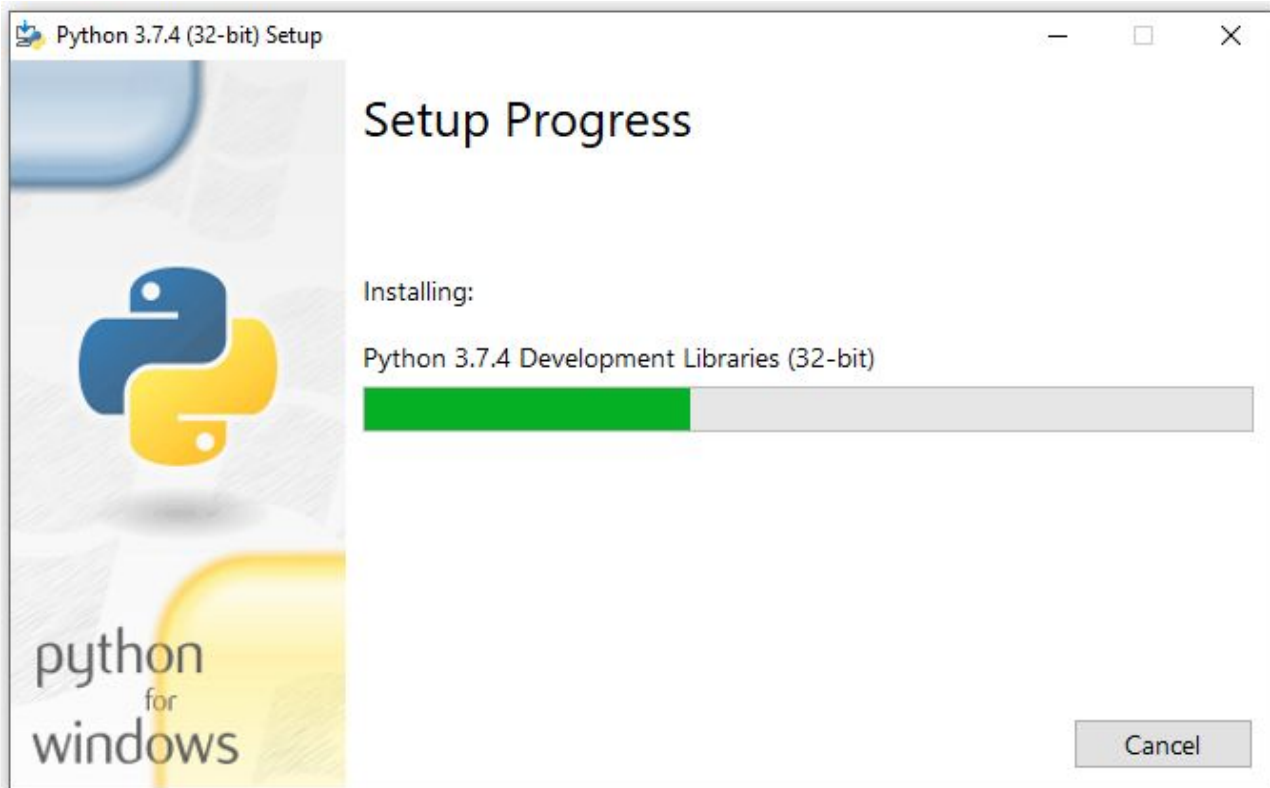
Pre-releases

- [Python 3.7.5rc1 - Oct. 2, 2019](#)
 - Download [Windows help file](#)
 - Download [Windows x86-64 embeddable zip file](#)
 - Download [Windows x86-64 executable installer](#)
 - Download [Windows x86-64 web-based installer](#)
 - Download [Windows x86 embeddable zip file](#)
 - Download [Windows x86 executable installer](#)
 - Download [Windows x86 web-based installer](#)
- [Python 3.8.0rc1 - Oct. 1, 2019](#)
 - Download [Windows help file](#)
 - Download [Windows x86-64 embeddable zip file](#)
 - Download [Windows x86-64 executable installer](#)

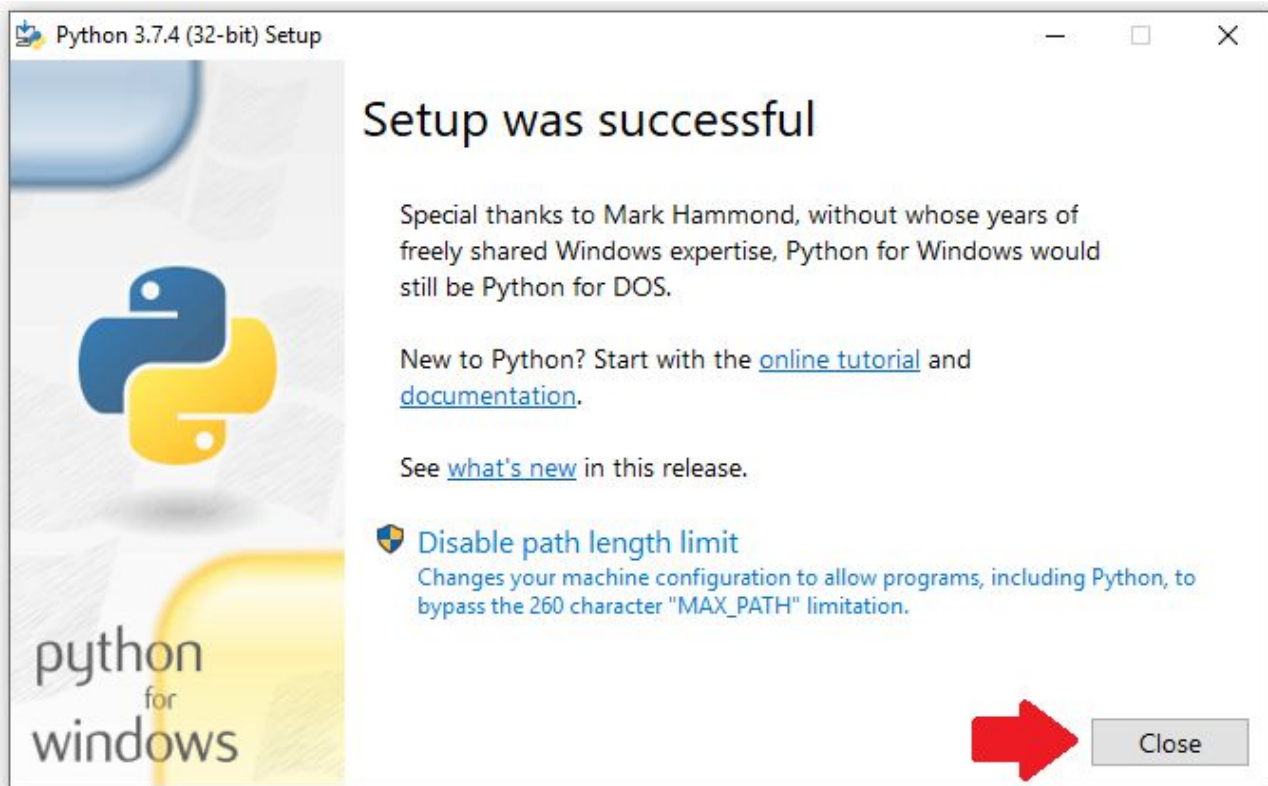
Instalação: PATH



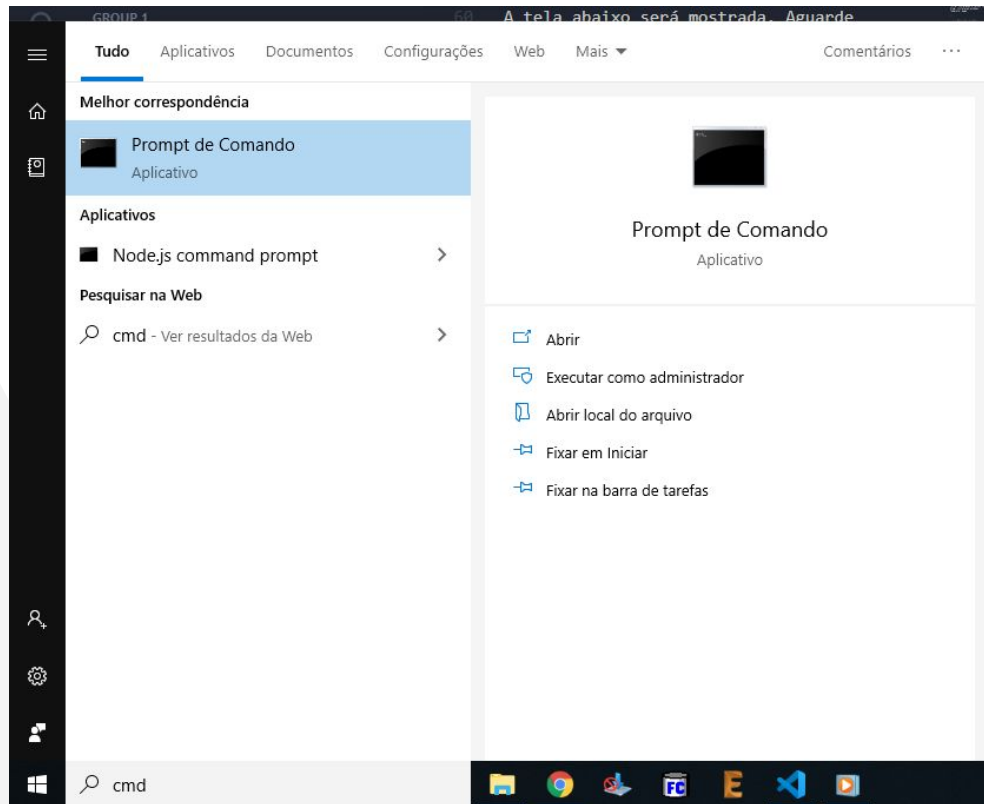
Instalação: Andamento



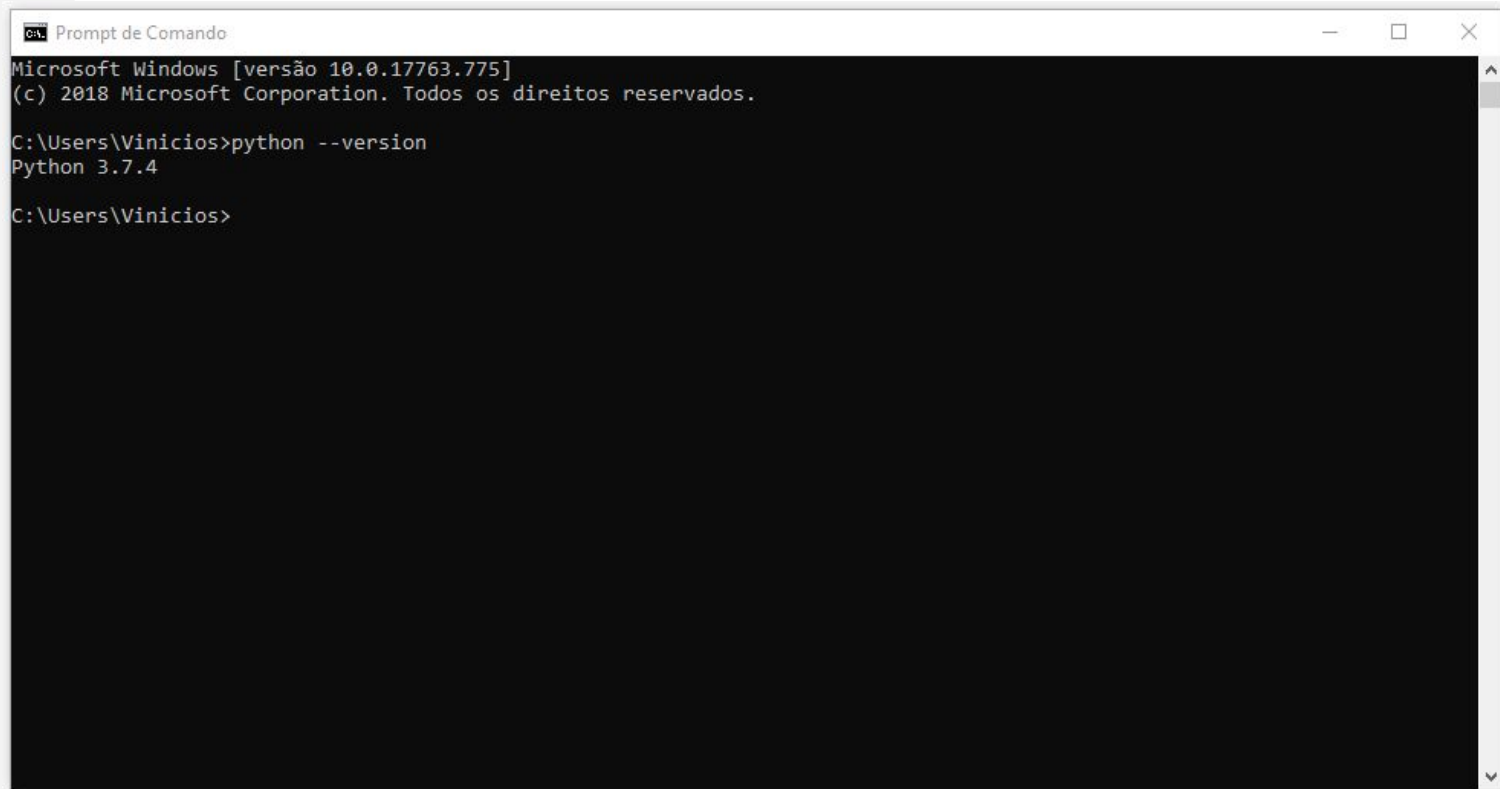
Instalação: Sucesso



Instalação: CMD



Instalação: CMD



```
Microsoft Windows [versão 10.0.17763.775]
(c) 2018 Microsoft Corporation. Todos os direitos reservados.

C:\Users\Vinicios>python --version
Python 3.7.4

C:\Users\Vinicios>
```

IDE (Ambiente de Desenvolvimento Integrado)



Usando a IDLE



The image shows a screenshot of the IDLE Shell 3.9.1 window. The window title is "IDLE Shell 3.9.1" and it has a standard Windows-style title bar with minimize, maximize, and close buttons. The menu bar includes "File", "Edit", "Shell", "Debug", "Options", "Window", and "Help". The main text area displays the following text:

```
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> |
```


Usando a IDLE

IDLE Shell 3.9.1

File Edit Shell Debug Options Win

New File Ctrl+N

Open... Ctrl+O

Open Module... Alt+M

Recent Files

Module Browser Alt+C

Path Browser

Save Ctrl+S

Save As... Ctrl+Shift+S

Save Copy As... Alt+Shift+S

Print Window Ctrl+P

Close Alt+F4

Exit Ctrl+Q

programacaoii.py - C:/Users/rvvar/C

File Edit Format Run Options

New File Ctrl+N

Open... Ctrl+O

Open Module... Alt+M

Recent Files

Module Browser Alt+C

Path Browser

Save Ctrl+S

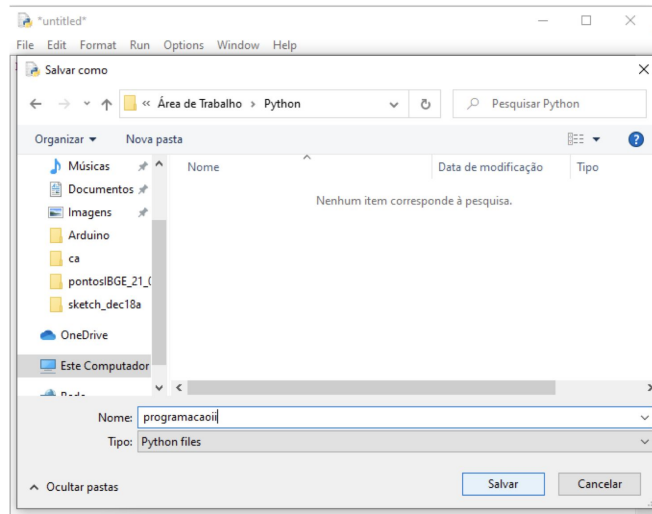
Save As... Ctrl+Shift+S

Save Copy As... Alt+Shift+S

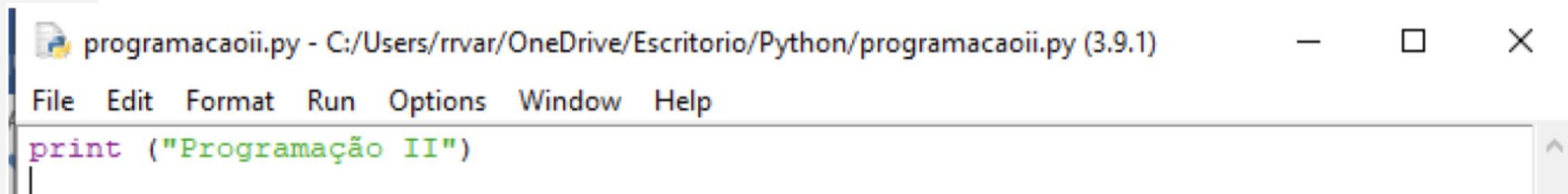
Print Window Ctrl+P

Close Alt+F4

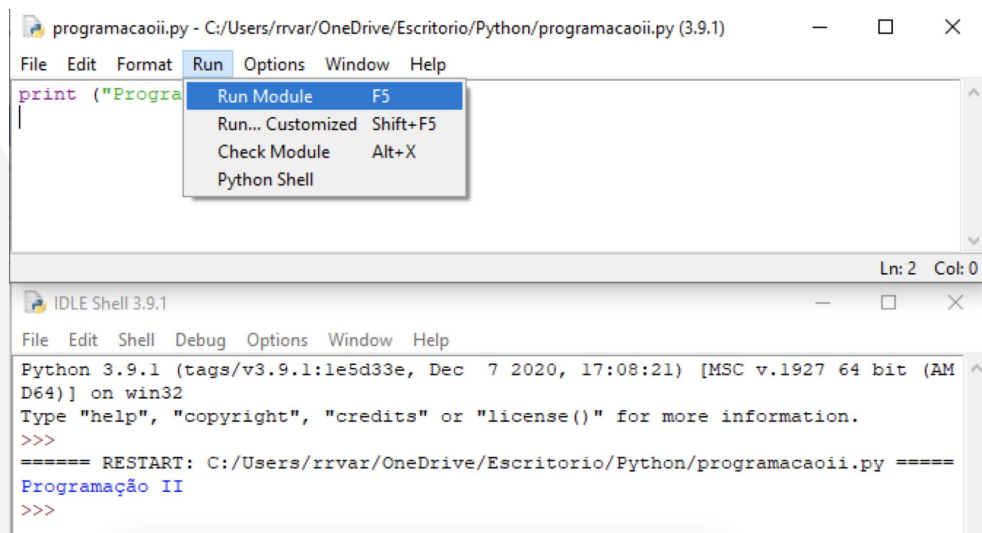
Exit Ctrl+Q



Usando a IDLE



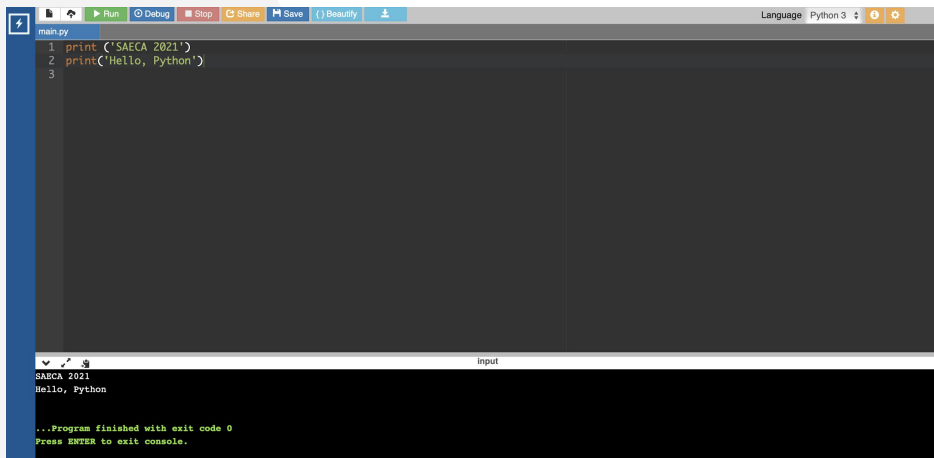
The screenshot shows the IDLE Python editor window. The title bar reads "programacaoii.py - C:/Users/rrvar/OneDrive/Escritorio/Python/programacaoii.py (3.9.1)". The menu bar includes "File", "Edit", "Format", "Run", "Options", "Window", and "Help". The code editor contains a single line of Python code: `print ("Programação II")`. The cursor is positioned at the end of the line.



The screenshot shows the IDLE Python editor window with the "Run" menu open. The menu options are: "Run Module" (F5), "Run... Customized" (Shift+F5), "Check Module" (Alt+X), and "Python Shell". Below the editor is the "IDLE Shell 3.9.1" window. The shell displays the output of the script: "Programação II".

```
Python 3.9.1 (tags/v3.9.1:1e5d33e, Dec 7 2020, 17:08:21) [MSC v.1927 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/rrvar/OneDrive/Escritorio/Python/programacaoii.py =====
Programação II
>>>
```

Python online



A screenshot of the OnlineGDB Python compiler interface. The top bar includes buttons for Run, Debug, Stop, Share, Save, and Beauty. The code editor contains the following Python code:

```
1 print('SAECA 2021')
2 print('Hello, Python')
3
```

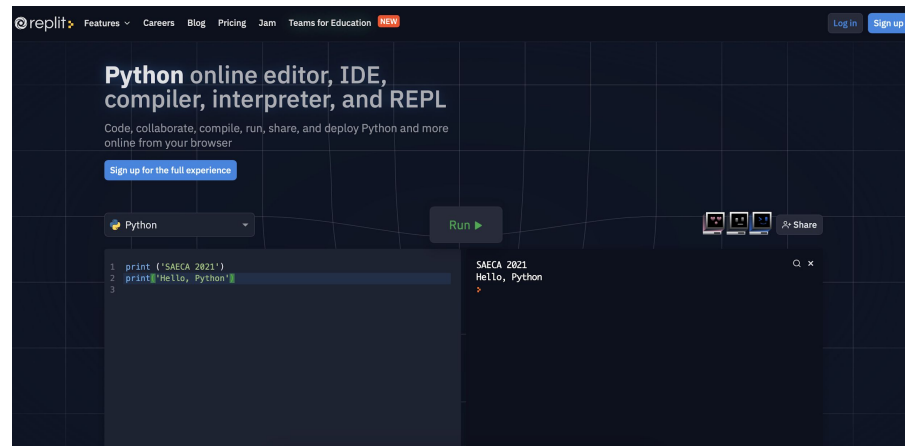
The output window shows the execution results:

```
SAECA 2021
Hello, Python

...Program finished with exit code 0
Press ENTER to exit console.
```

▶ OnlineGDB

https://www.onlinegdb.com/online_python_compiler



A screenshot of the Replit Python online editor interface. The top navigation bar includes links for Features, Careers, Blog, Pricing, Jam, Teams for Education, and a NEW badge. The main heading reads "Python online editor, IDE, compiler, interpreter, and REPL". Below this, a sub-heading states "Code, collaborate, compile, run, share, and deploy Python and more online from your browser". A "Sign up for the full experience" button is visible. The code editor shows the same Python code as the OnlineGDB interface:

```
1 print('SAECA 2021')
2 print('Hello, Python')
3
```

The output window displays the results:

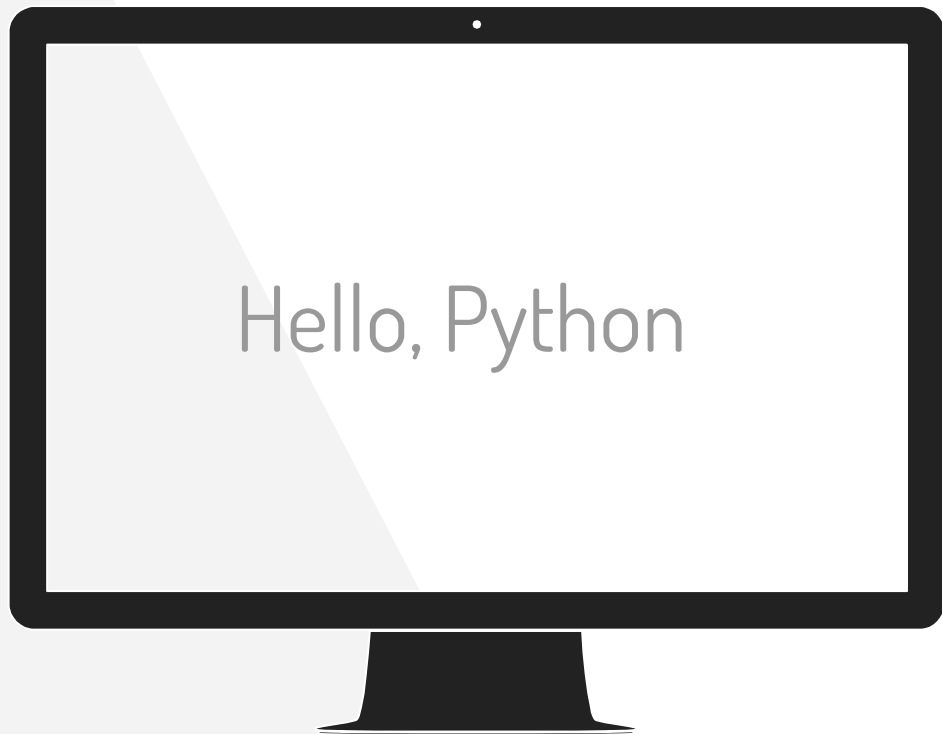
```
SAECA 2021
Hello, Python
```

▶ Replit

<https://replit.com/languages/python3>

Codificação

Agora vamos programar. Começaremos com *Hello, Python*



Código-fonte:

```
print('Hello, Python')
```

“

*Só se aprende a programar
programando.*

- **Rogério Vargas**

”

Hello, Python

Alguma dúvida?

Considerações finais...

Contato

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rogeriovargas@unipampa.edu.br
<http://rogerio.in>

