

Welcome to NeuroHackademy 2020

I wish you were all here...

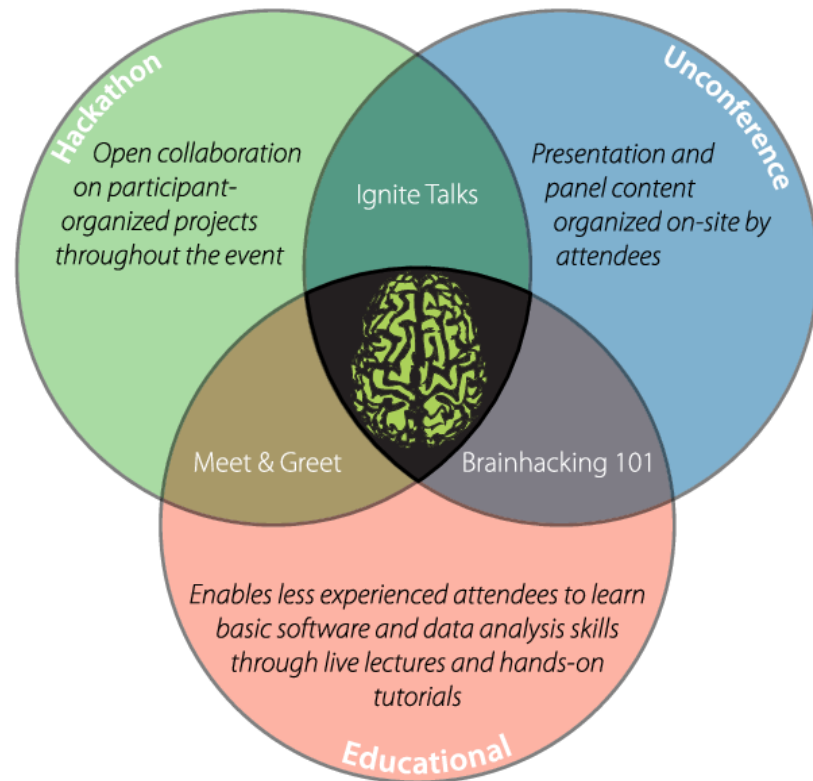


What is NeuroHackademy?

A summer institute in neuroimaging and data science

- A summer school
- A (un)conference
- A hackathon

Brainhack



The hacker ethos (based on Steven Levy's, "*Hackers*")

- The hands-on imperative
- Sharing
- Information should be free
- Mistrust authority - promote decentralization
- ~~Meritocracy~~ Inclusivity
- You can create beautiful things with computers
- Computers can change your life for the better

The hacker ethos meets the reproducibility ~~erisis~~ renaissance



Data-intensive neuroscience

The era of brain observatories

- Data-intensive methods
- Team science
- Open-source software










Python

Neuroimaging in Python

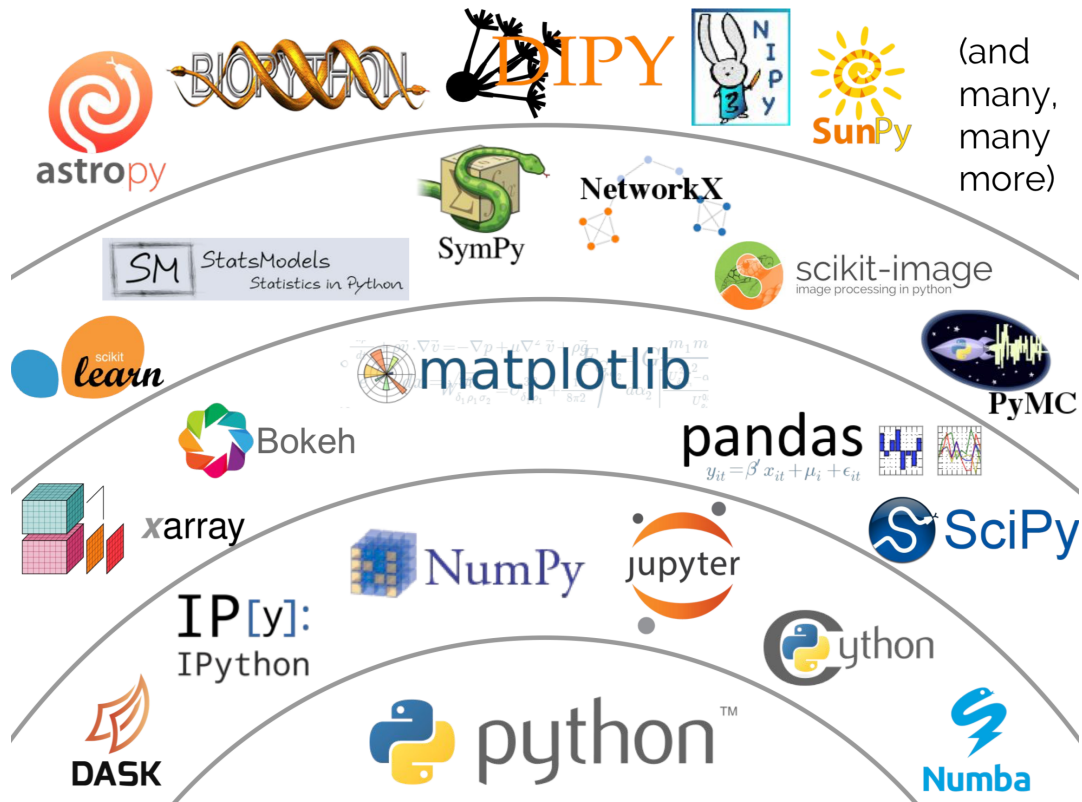
Scipy / Pydata

Python in industry

IEEE Spectrum PL ranking 2020

Rank	Language	Type	Score
1	Python ▼	  	100.0
2	Java ▼	  	95.3
3	C ▼	  	94.6
4	C++ ▼	  	87.0
5	JavaScript ▼		79.5
6	R ▼		78.6
7	Arduino ▼		73.2
8	Go ▼	 	73.1
9	Swift ▼	 	70.5
10	Matlab ▼		68.4

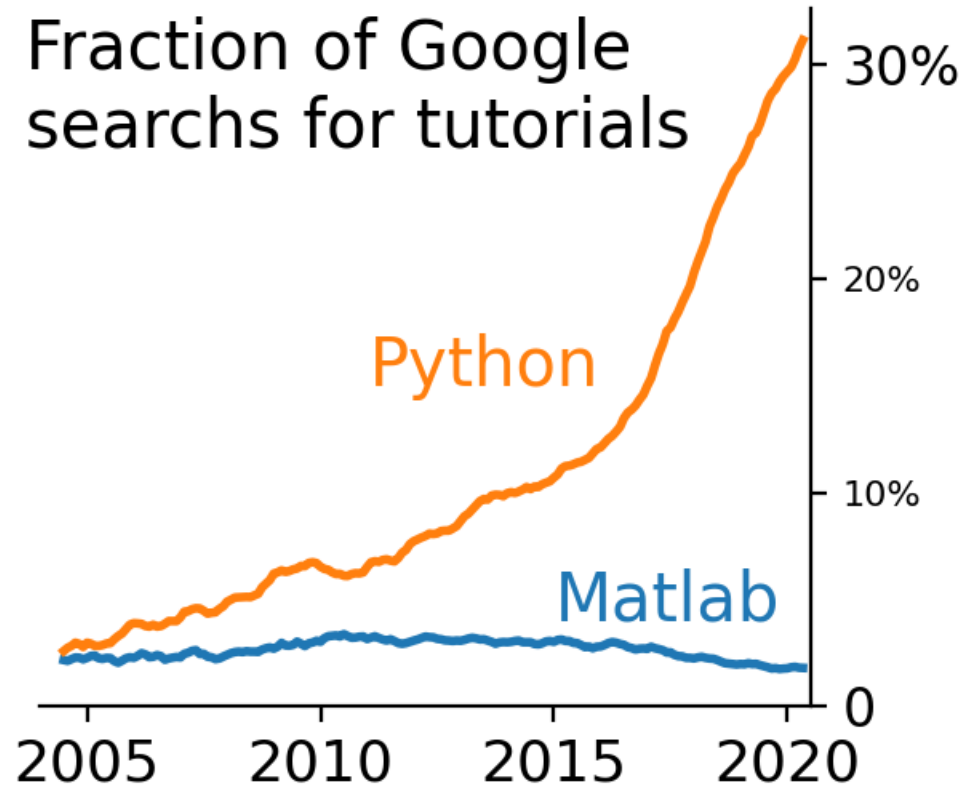
Scientific python ecosystem



(From Jake Vanderplas' PyCon talk, 2017)

Python in neuroimaging

Fraction of Google searches for tutorials

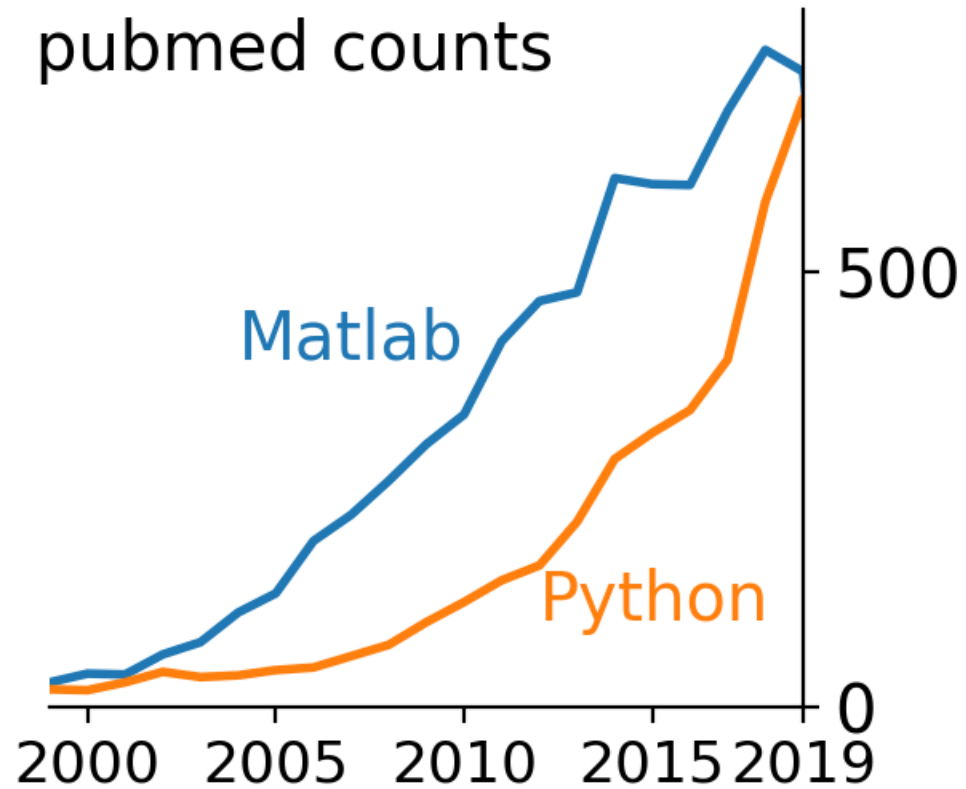


(Poldrack, Gorgolewski & Varoquaux, 2019; updated in

<https://twitter.com/GaelVaroquaux/status/1263413593615273986>)

Python in neuroimaging

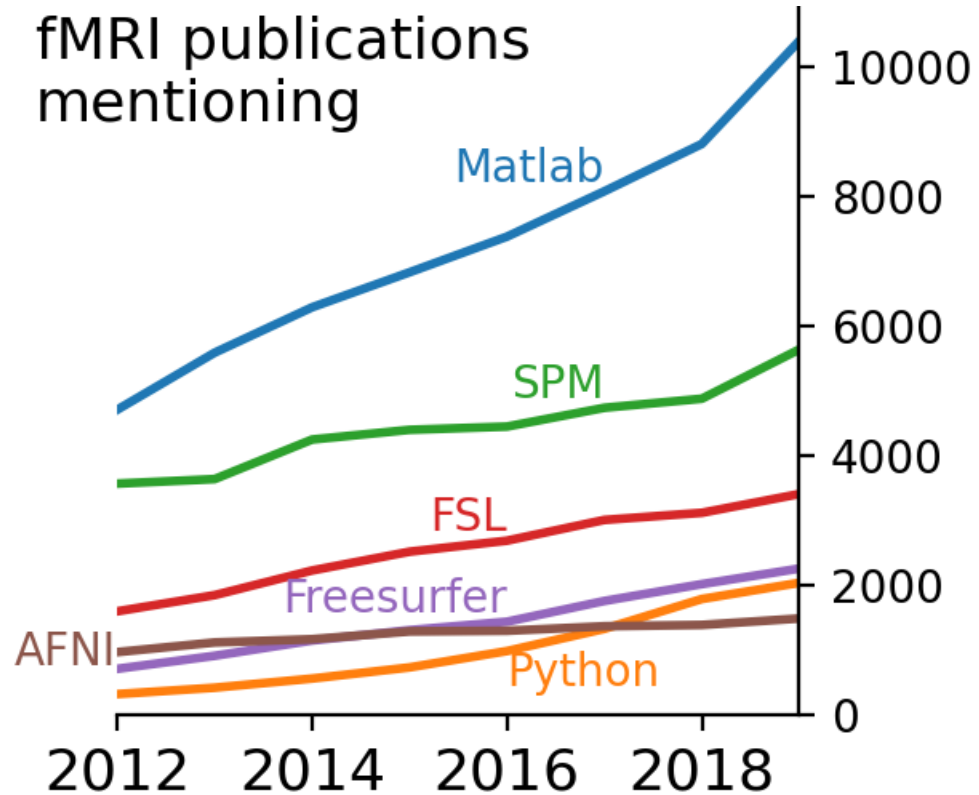
pubmed counts



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Python in neuroimaging



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The plan

- Mon - Thu: Tutorials, lectures
- Friday: Hackathon

Tutorials

ADSI

Hackathon?

Slack

Jupyterhub

Git/GitHub

Gather town