Python Tsunami

– April 21st-23rd –

Center for Health Data Science (HeaDS)

https://heads.ku.dk

- **The Data Science lab:**
  - Provides data science support for all research groups at SUND
  - Organizes courses
- **Research units:**
  - work on different areas and topics within the field of health data science

The Team

1. Alberto Santos (HeaDS)
2. Annelaura Bach Nielsen (NNF CPR)
3. Davide Placido (NNF CPR)
4. Henry Webel (NNF CPR)
5. Marilena Hohmann (HeaDS)
6. Philip Charles (DBI (Oxford, UK))
7. Rita Colaço (PRI)
8. Roc Reguant (NNF CPR)
9. Thilde Terkelsen (HeaDS)
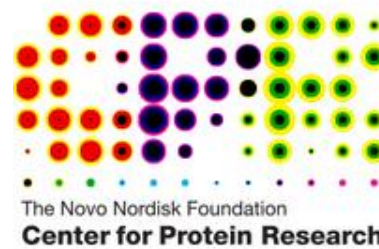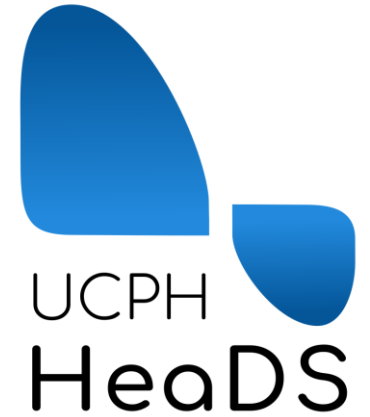
Practical Things about the Course

Program

Coffee and Q&A

Teams

Breakout rooms

Datathon

Practical Things about the Course

-- Program --

	Wednesday 21st April	Thursday 22nd April	Friday 23rd Friday
8:45-9:00	Coffee and the day before (optional)		
9:00-09:45	Introduction and motivation	Conditions	Visualization I
9:45-10:00	Coffee break		
10:00-11:00	Installation and tools	Loops	Visualization II
11:00-12:00		Functions	Introduction Datathon
12:00-13:00	Lunch break		
13:00-14:00	Variables and data types	Libraries	Datathon
14:00-14:45	Numbers and operators	Scientific python	
14:45-15:15	Coffee break		
15:15-16:00	Data structures	Pandas	Datathon
16:00-17:00			Presentations
17:00-17:30	Q&A		What else is there?

Practical Things about the Course
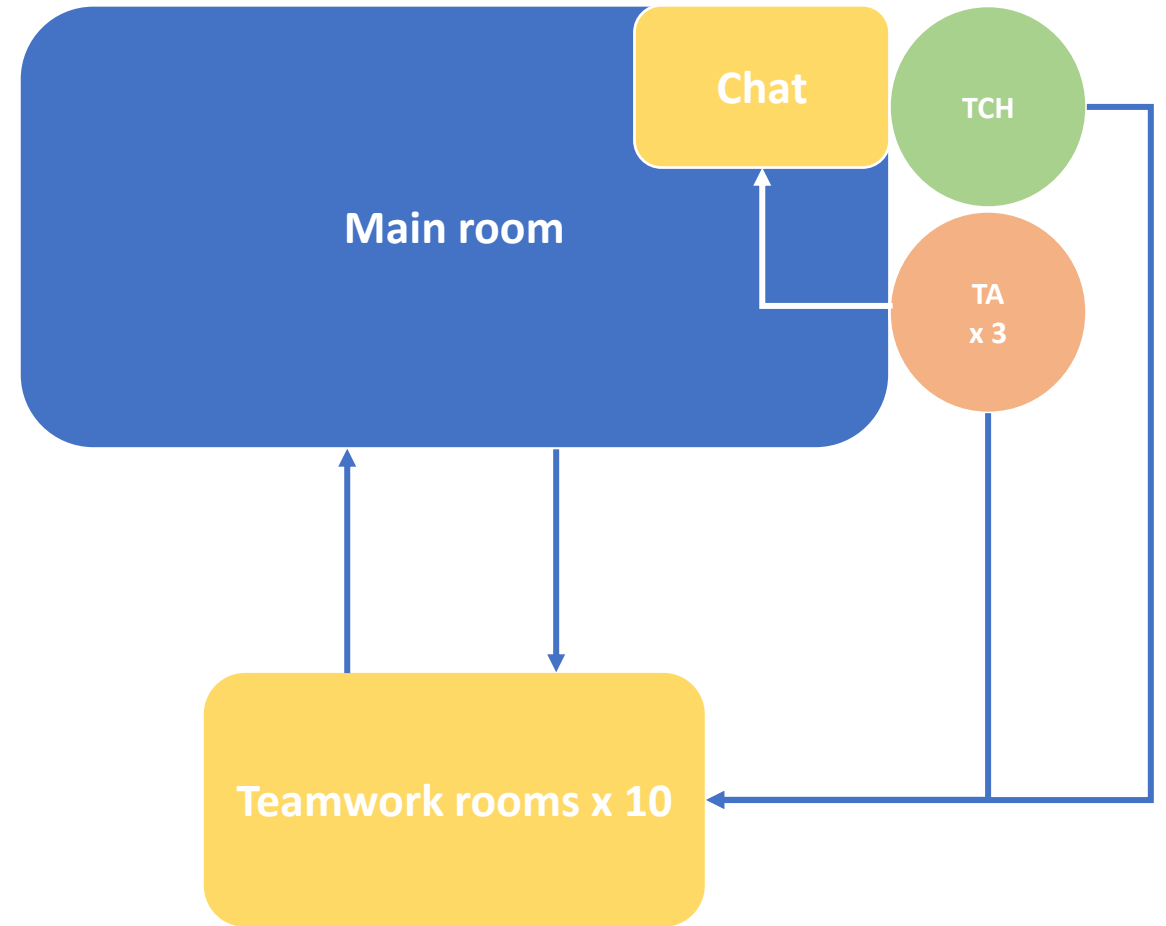
-- Teams --

49 participants divided into **10 fixed teams**

2 working **modes**:

- **Individual**: exercises
- **Teamwork:** discussions, practice and the Datathon

Practical Things about the Course
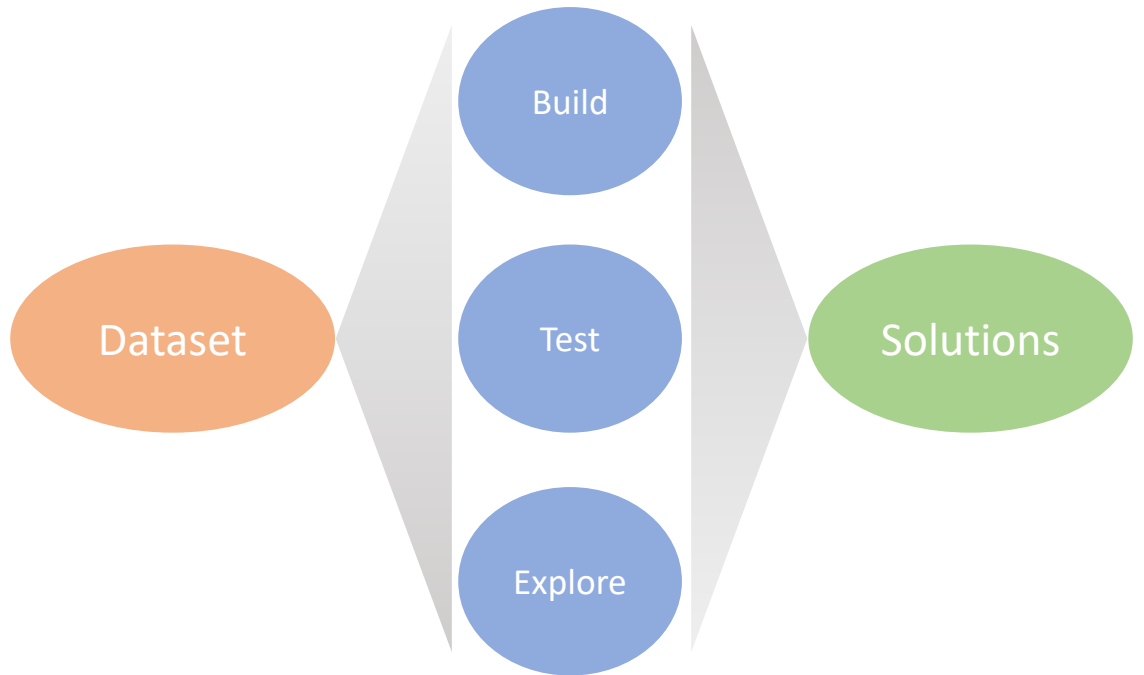
-- Breakout Rooms --

Main room

Chat

TCH

TA x 3

Teamwork rooms x 10

Practical Things about the Course

-- Datathon --

A **Datathon** is a **data-focused competition** — given a **dataset** and a limited amount of time, participants are challenged to use their **creativity** and **data science skills** to:

Practical Things about the Course

-- Datathon --

A **Datathon** is a **data-focused** ~~competition~~ — given a **dataset** and a limited amount of time, participants are challenged to use their **creativity** and **data science skills** to:
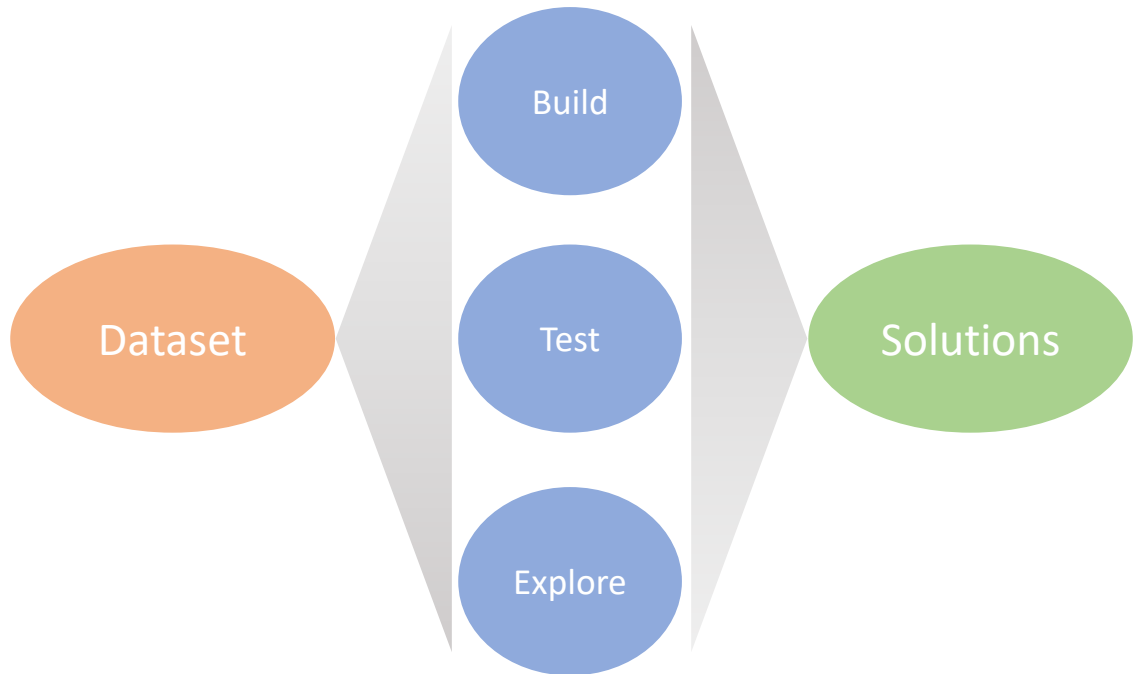
Dataset

Build

Test

Explore

Solutions

What will you learn in this course?

Tools to work with Python

The basics of Python

Some of the most relevant scientific libraries

Visualization
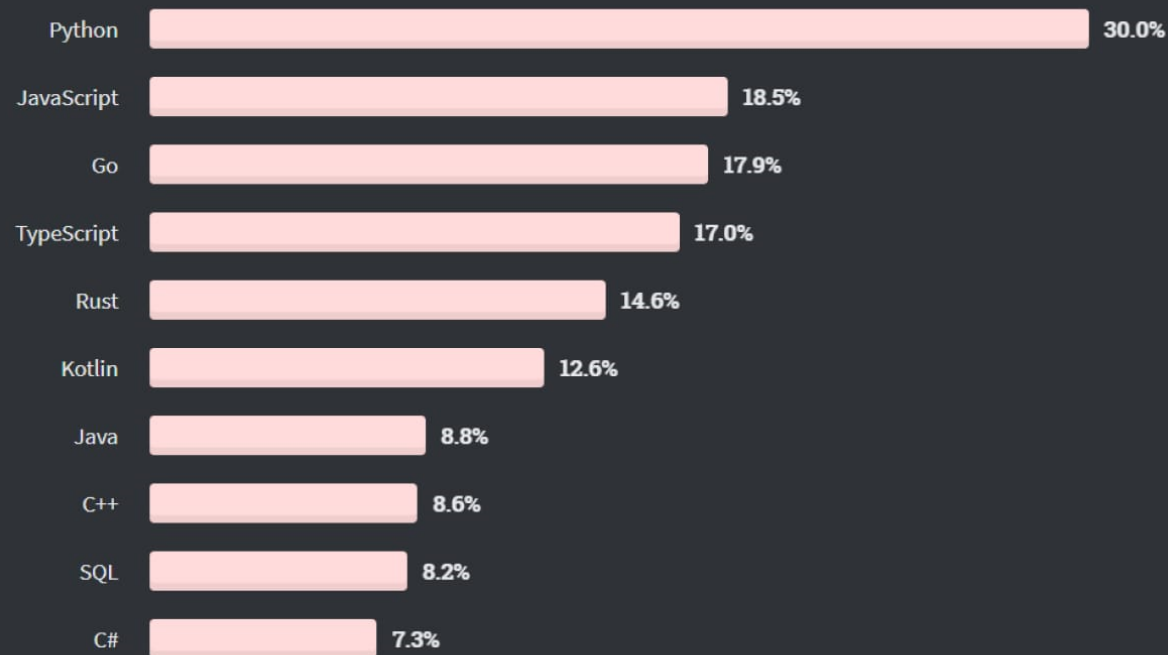
Good practice

Why Python?

The most wanted top programming languages

Language	Percentage
Python	30.0%
JavaScript	18.5%
Go	17.9%
TypeScript	17.0%
Rust	14.6%
Kotlin	12.6%
Java	8.8%
C++	8.6%
SQL	8.2%
C#	7.3%

- Python is **easy to use**, **powerful**, and **versatile**

- A great choice for **beginners** and **experts** alike

- Python's readability makes it a great **first programming language**

- It has a **huge community behind** developing useful libraries in many different fields (i.e biology, imaging, etc.)

Coffee with your team

- **Introduce** yourself and **what you do**

- Explain your **motivation** to take the course

- Discuss what **data** could be relevant for you