loglab

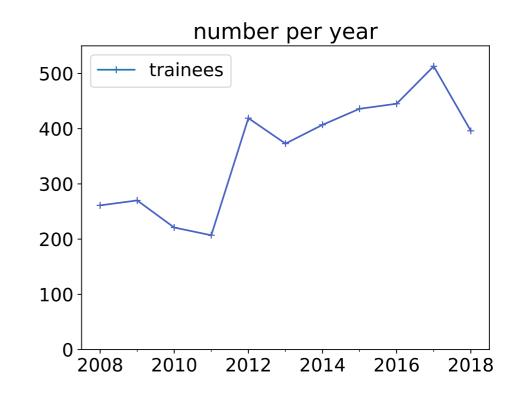
- French private SME
- Founded in 2000
- 20 people
- 2 M€ of annual turnover

Profile of trainees:

- Engineers, scientists, etc.
- Already working in big companies or organisations
- Wanting to enhance their skills:
 - learning Python programming
 - improving their Python knowledge

Activity:

- Software development
 - Python, JavaScript, etc.
- Consulting
- Professional trainings
 - since 2000
 - 20 to 40% of annual turnover

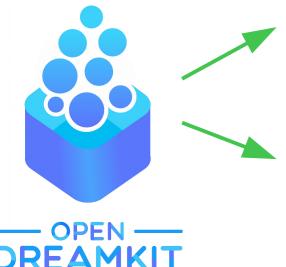


At first:

- Sessions of 4 or 5 contiguous days
- PDF slides
- PDF exercises manual
- Exercises in regular Python files

3 sur 7 < > Q E exercises.pc 353 (3) 2. From this dictionary, compute the min the sensors.	i3sur494) < > Q	n pour le scientifique 161,60% ✓ 🕞 subscrift de création de tableau
Exercise 9 – Creating NUMPY arrays	En plus de la fonction array, on p	eut trouver :
	Fonction	Description
1. Create (in the simplest possible way) t	<pre>zeros(dims, dtype=float, order='C')</pre>	crée un tableau de la forme dims=(d1,, donnée, rempli de 0.
$\begin{pmatrix} 1. & 1. & 1. & 1. \\ 1 & 1 & 1 & 1. \end{pmatrix}$	<pre>ones(dims, dtype=float, order='C')</pre>	crée un tableau de la forme donnée, rempli de 1.
• $A = \begin{pmatrix} 1. & 1. & 1. & 1. \\ 1. & 1. & 1. & 1. \\ 1. & 1. &$	<pre>empty(dims, dtype=float, order='C')</pre>	crée un tableau de la forme donnée, non initialisé.
1. 6. 1. 1./	zeros_like(x)	crée un tableau de mêmes caractéristiques (type, for ordre) que x, mais rempli de 0.
$\begin{pmatrix} 0. & 0. & 0. & 0. \\ 2. & 0. & 0. & 0. \end{pmatrix}$	ones_like(x)	crée un tableau de mêmes caractéristiques (type, for ordre) que x, mais rempli de 1.
$\bullet \ B = \begin{pmatrix} 0. & 0. & 0. & 0. \\ 2. & 0. & 0. & 0. \\ 0. & 3. & 0. & 0. \\ 0. & 0. & 4. & 0. \end{pmatrix}$	empty_like(x)	crée un tableau de mêmes caractéristiques (type, for ordre) que x, mais non initialisé.
0. 0. 4. 0.	arange(debut, fin, pas)	crée un tableau de dimension 1 tout con
Ouvrir ▼ J∓l ex9.py -/exercis	ocy@vulpecula	: ~/exercises
<pre>import numpy as np ocygvi [[1. [a = np.ones((4,4)) [1. [1. [1. [1.]]</pre>	<pre>ilition Affichage Rechercher Terminal Aide ulpecula:~/exercises\$ p 1. 1. 1.] 1. 1. 1.] 1. 1. 1.] 1. 1. 1.] 1. 1. 1.] 1. 1. 1.] ulpecula:~/exercises\$</pre>	

- **Problems:** Difficulty to set up environment for exercises
 - Python, various libraries, editors, IDEs
 - Lack of interactivity



- Virtual environments
 - accessible through a simple Web browser
 - containing a set of integrated libraries
- Interactive tools (e.g. Jupyter and its satellites)
 - usable for demos, exercises, course
 - providing a better learning experience

Nowadays:

- Virtual environments dedicated to trainings
 - hosted on https://www.simulagora.com/
 - specific to each person
 - using Jupyter, JupyterHub, JupyterLab
- Specific JupyterLab component dedicated to exercises
 - https://gitlab.com/logilab/jupyterlab-training
 - free software
 - usable with any Jupyter kernel
 - list of available exercises
 - tags, categories, difficulty
 - each exercise described in a Jupyter notebook
 - description and questions
 - cell for writing the code
 - button for executing automatic tests
 - button to display the solution

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Thanks to OpenDreamKit:

- A new way to conduct training sessions
 - each trainee can go at his own pace
 - focusing on the parts he wants to work on
- A better learning experience
 - interactive, integrated environment
 - accessible through a simple Web browser

• A free sofware component

- that can be used to learn any language available in Jupyter
- that gathers exercises defined in source repositories
- A differentiating factor for Logilab
 - trainees love it and continue to use it after the training
 - we have to cut off access 1 month after the session