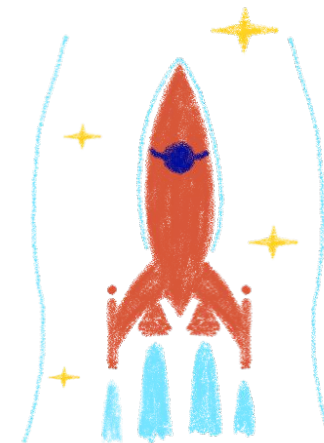


DataOps.Rocks

by Saagie



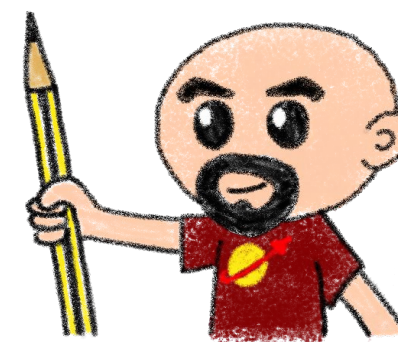
Let's democratize Artificial Intelligence

Guillaume Ruty & Horacio Gonzalez

2021-09-23



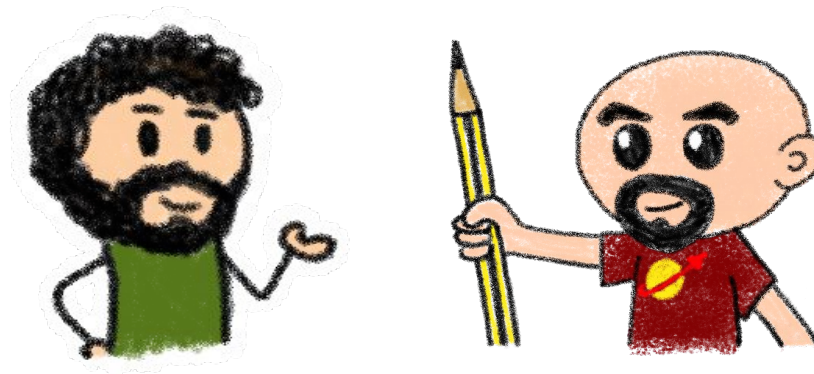
@Le_Gruty



@Lost In Brittany

Who are we?

Introducing ourselves and
introducing ~~OVH~~ OVHcloud



Guillaume Ruty

@Le_Gruty

Solution Architect/Principal Engineer

Big Data, AI/ML

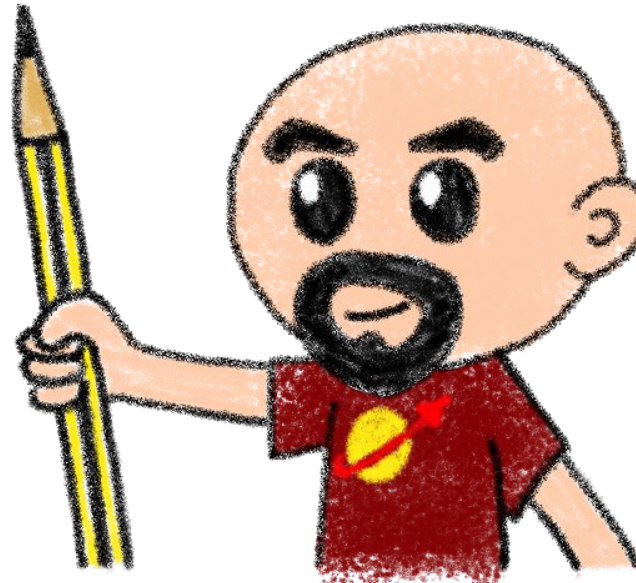
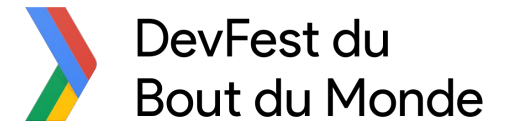


Horacio Gonzalez



@LostInBrittany

Spaniard lost in Brittany,
developer, dreamer and
all-around geek



OVHcloud: A global leader



Web Cloud & Telecom



Private Cloud



Public Cloud



Storage



Network & Security



30 Data Centers
in 12 locations



34 Points of Presence
on a 20 TBPS Bandwidth Network



2200 Employees
worldwide



115K Private Cloud
VMS running



300K Public Cloud
instances running



380K Physical Servers
running in our data centers



1 Million+ Servers
produced since 1999



1.5 Million Customers
across 132 countries



3.8 Million Websites
hosting



1.5 Billion Euros Invested
since 2016



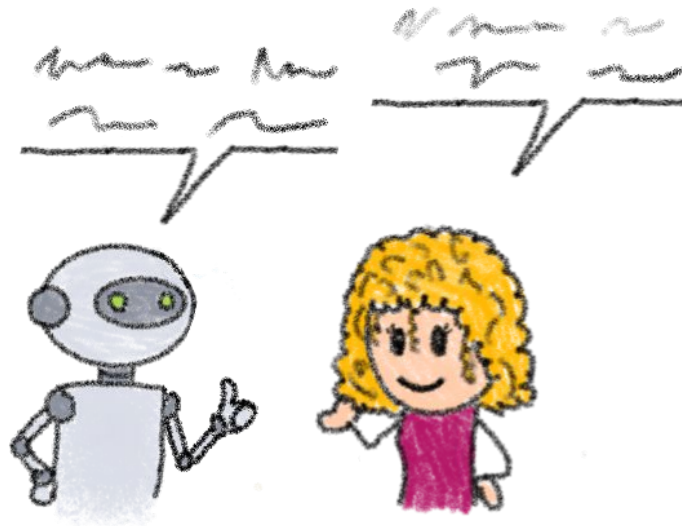
P.U.E. 1.09
Energy efficiency indicator



20+ Years in Business
Disrupting since 1999

The many faces of AI

And the people who work on it



We often identify two kinds of AI users

A



Doing AI

Startups, Tech companies
Public sector, governments
Services providers

I have data scientists in my company.
I need an **AI toolbox** to develop my projects

B



Using tools

« **powered by AI** »
Mid-Large companies
Public sector

I'm looking for **Out-of-the box data products powered by AI** ! A Chatbot, Fraud analyzer, a search engine, ...

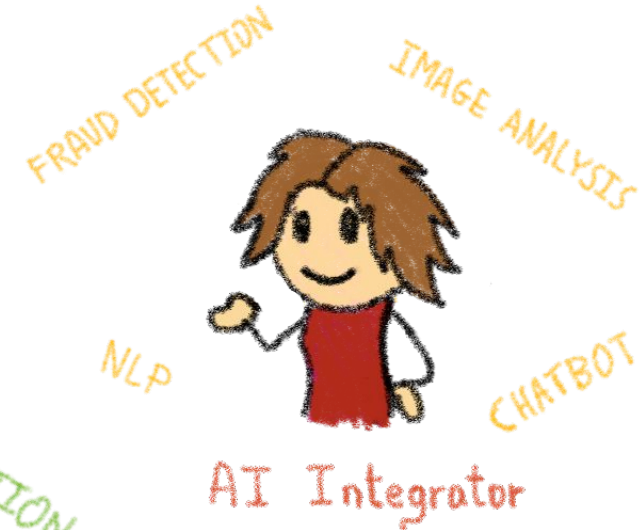
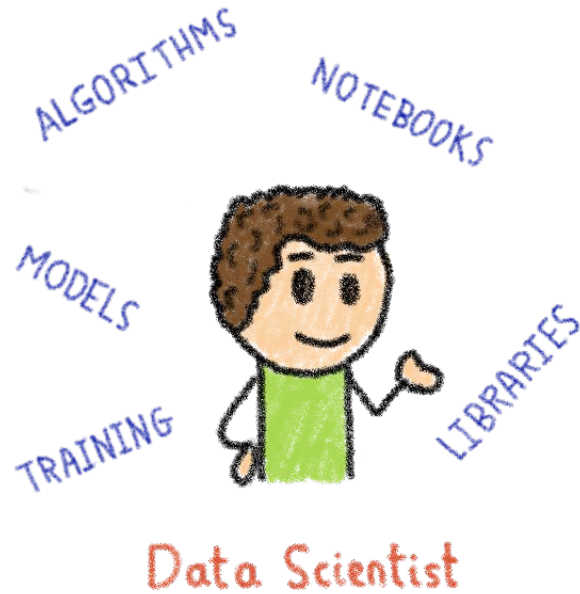
And, of course

- Simple
- Secured
- With privacy
- With cost control

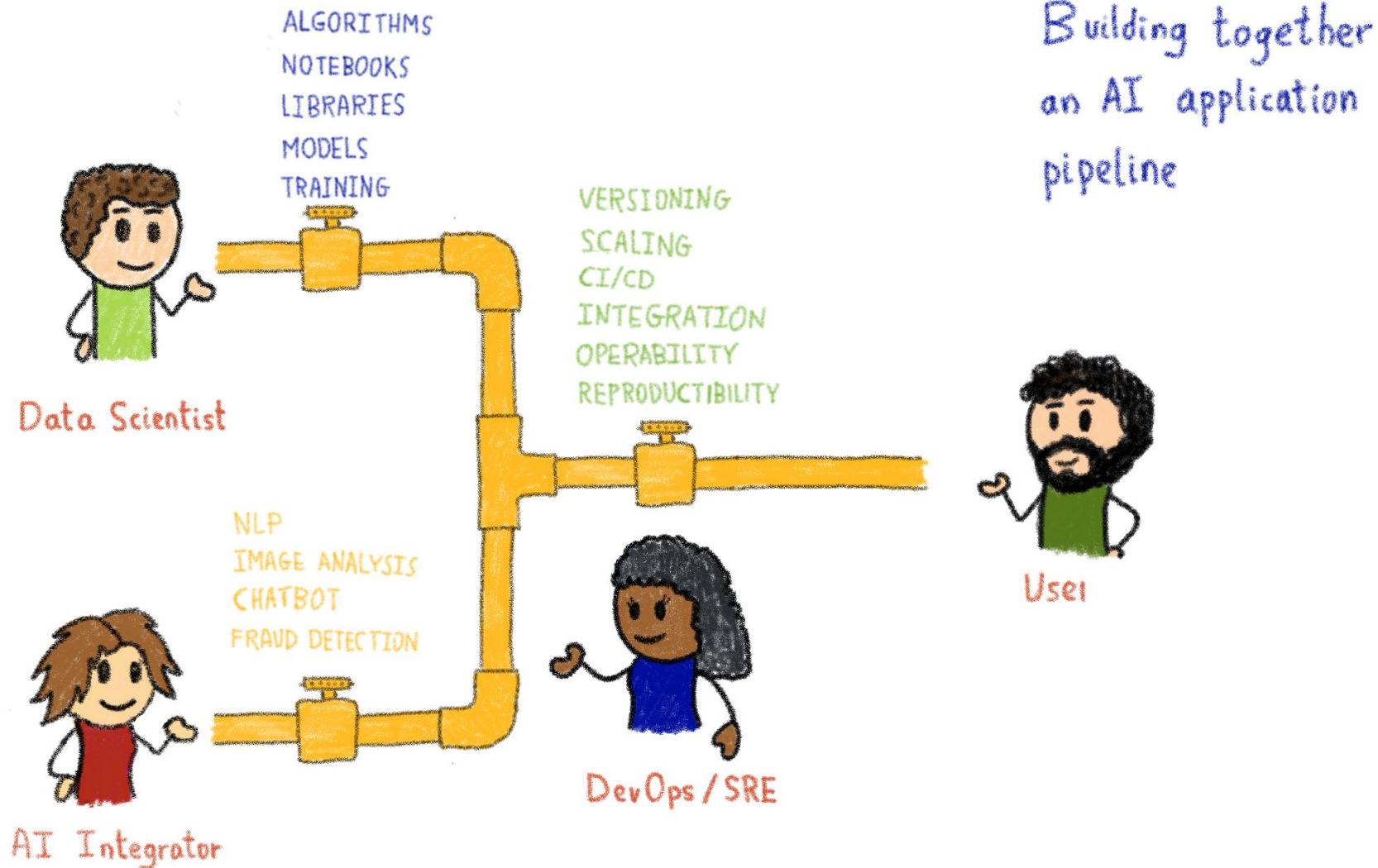
But there is a third one: DevOps/SRE



They speak different languages



But they need to work together



The challenge of integration



Integrating AI/ML & DevOps/SRE teams, process, and tools

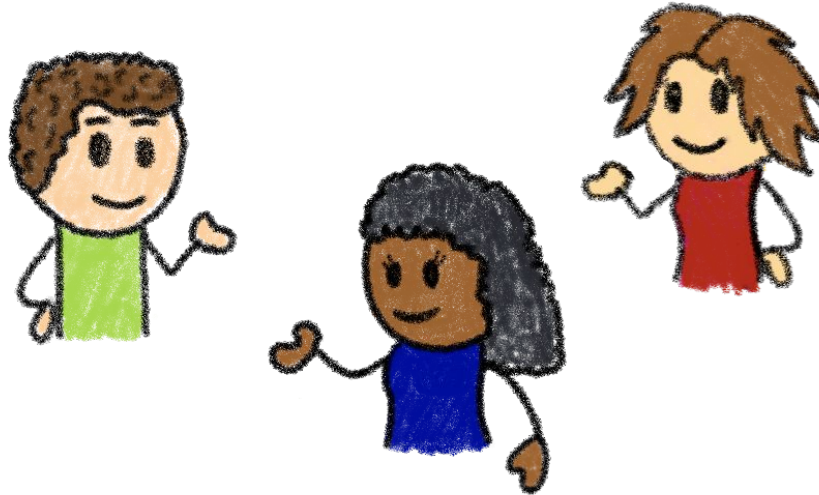
Many questions to answer...

We need to setup / use
AI environments
easily & quickly.
Infrastructure?
Not our job.

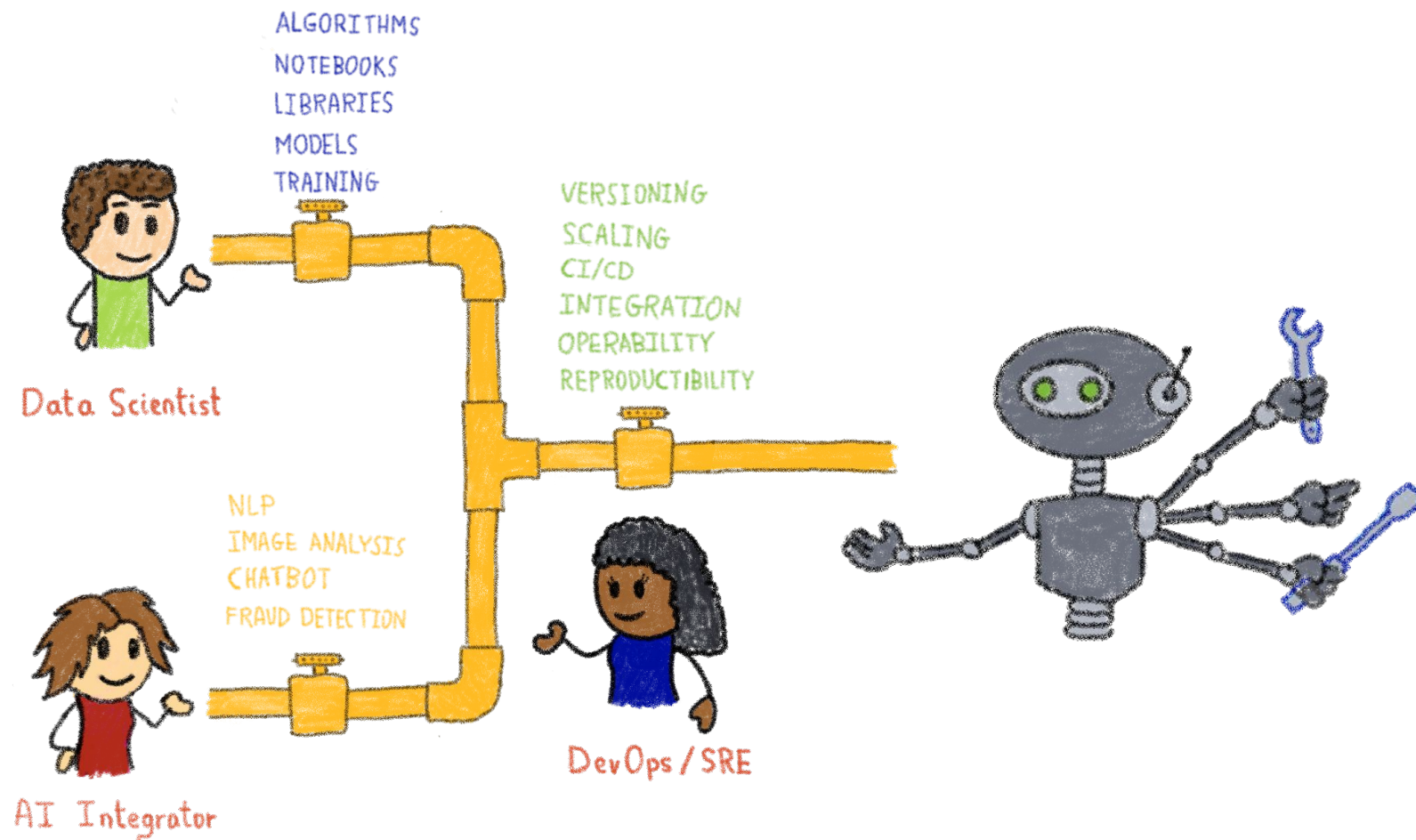
Our team needs to
collaborate and have
guaranteed access to
resources.

Our needs for resources
are evolving.
We need scalability and
pay as we grow.

How do we guarantee
the security and
compliance required
for critical or sensitive
data?



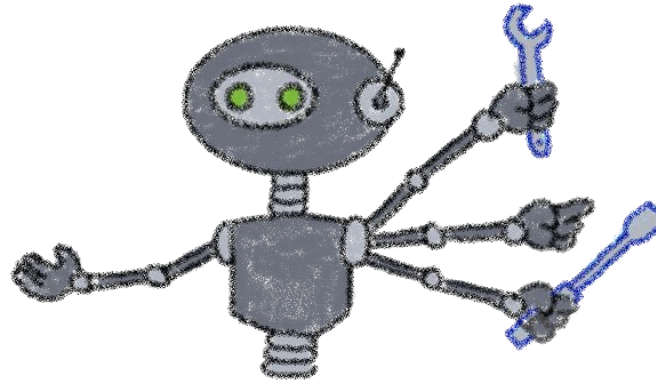
Automate the end-to-end pipeline



From idea to production

OVHcloud & AI

Our answer to AI pipeline automation

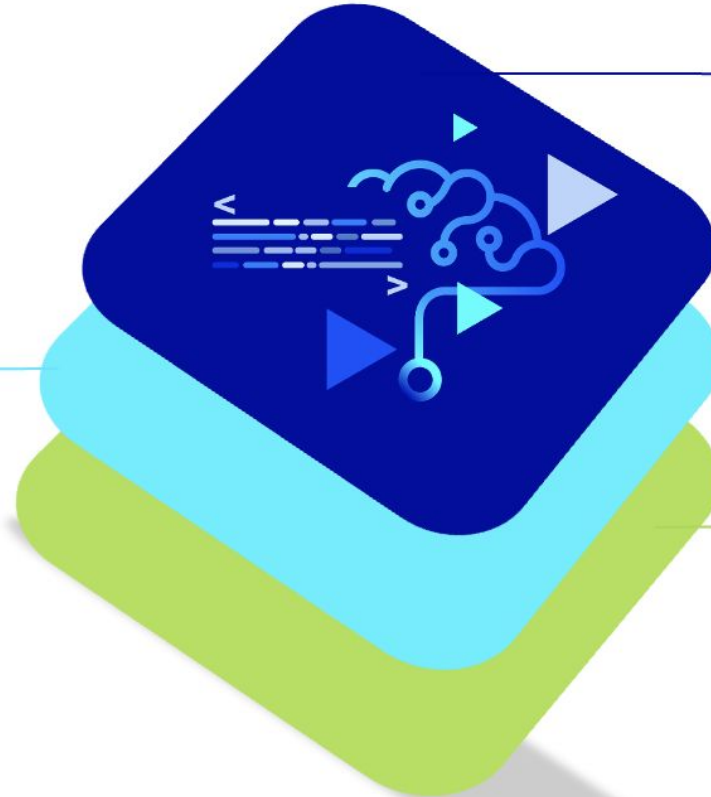


Our approach to tackle the problem

AI Solutions

AI platform
All the PaaS tools you
need to build and host
your AI projects

A



AI hub **ambition**

Built with an ecosystem, our aim is to provide AI services (SaaS) out of the box: computer vision, NLP, ...

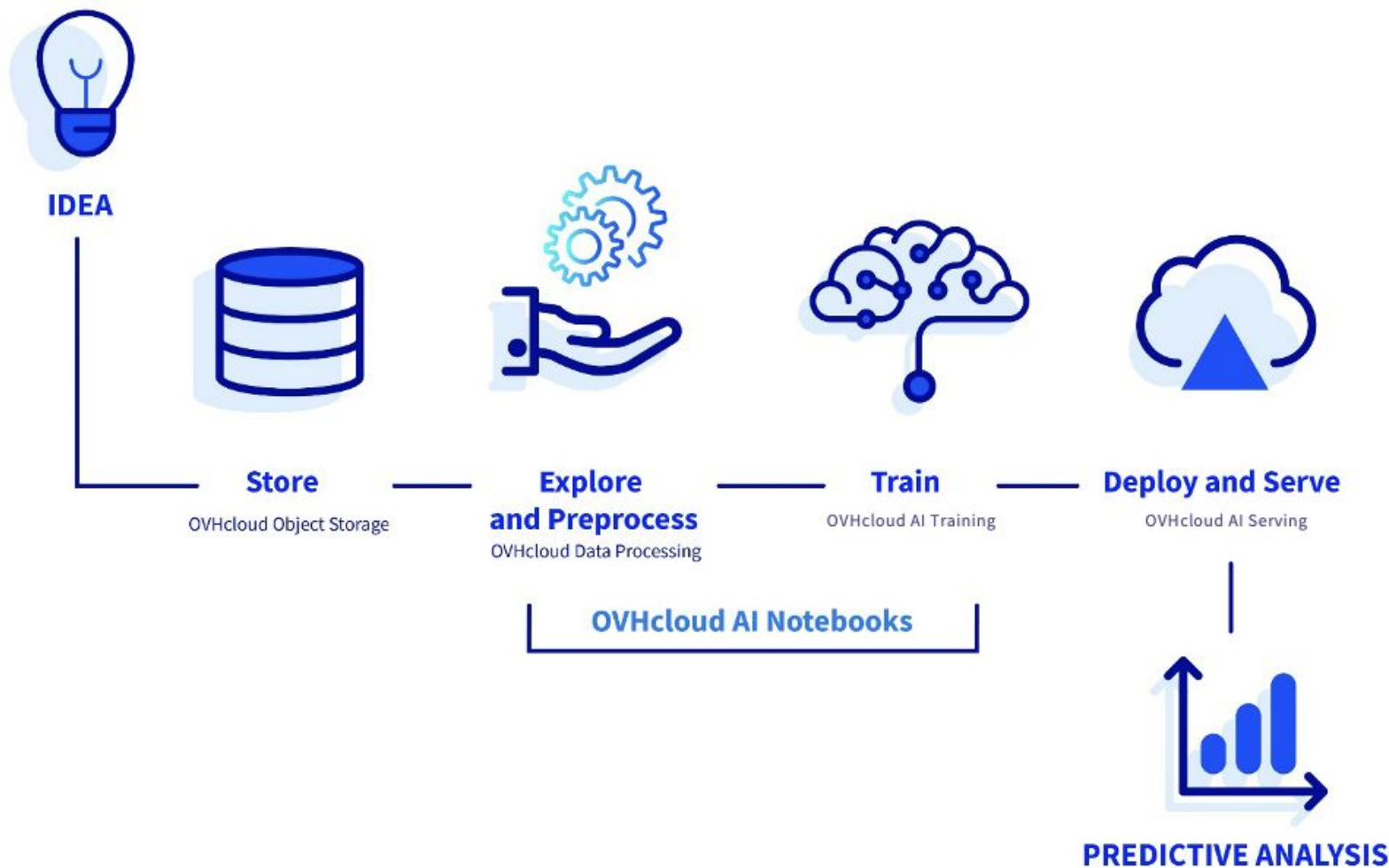
B

Our alternative Public Cloud

Based on European values, with European law and powered by Openstack open source cloud.



AI Platform



Managed services
from idea to production

- AI Notebooks
- AI Training
- ML Serving

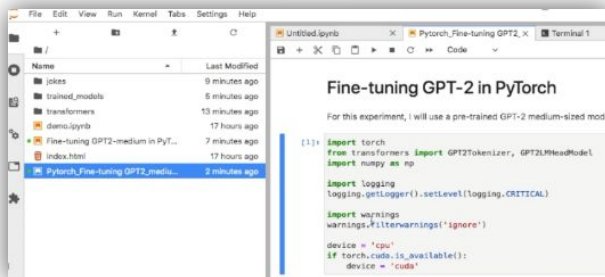
OVHcloud AI Platform

Store

OVHcloud Object
Storage

Explore and preprocess

OVHcloud Data
Processing



Each project step can be managed
with **user-friendly AI Notebooks**



Train

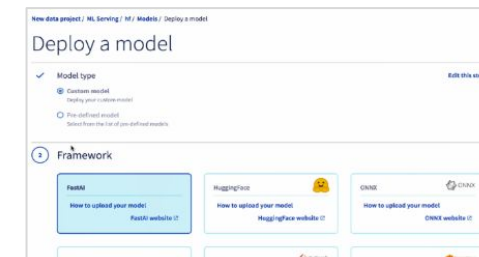
OVHcloud AI Training



Quickly train your model without
complex setup configuration,
allowing **CPU/GPU parallelization**

Deploy and Serve

OVHcloud AI Serving



Deploy your model with
industry-leading AI frameworks



▶ Built on OVHcloud **trusted** and **secured cloud**, designed
for **large dataset** (leveraging Object Storage scalability)

▶ Working with third parties to propose **out-of-the-box AI
services** and **ready-to-use ML models** adapted to
specific use cases (e.g., Healthcare, Transport)

OVHcloud AI Hub

AI hub

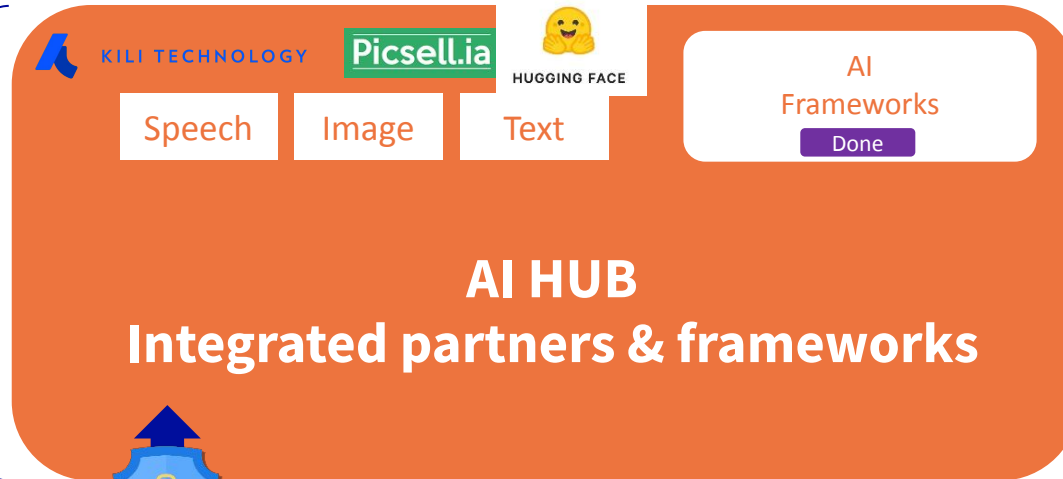
- ✓ Hosted on OVHcloud
- ✓ Fully integrated
- ✓ Easy to use (as a service)

More partners to come
(ETA Nov. 2021)

Ongoing

Ex: Chatbot, Search engine, Fraud detector,
Healthcare apps, DataViz, Translators, ...

TensorFlow PyTorch
learn



Cloud
Infrastructure & policies

OVHcloud NVIDIA

AI Services

Consulting
MCO
...



Capgemini

serco

HCL

THALES

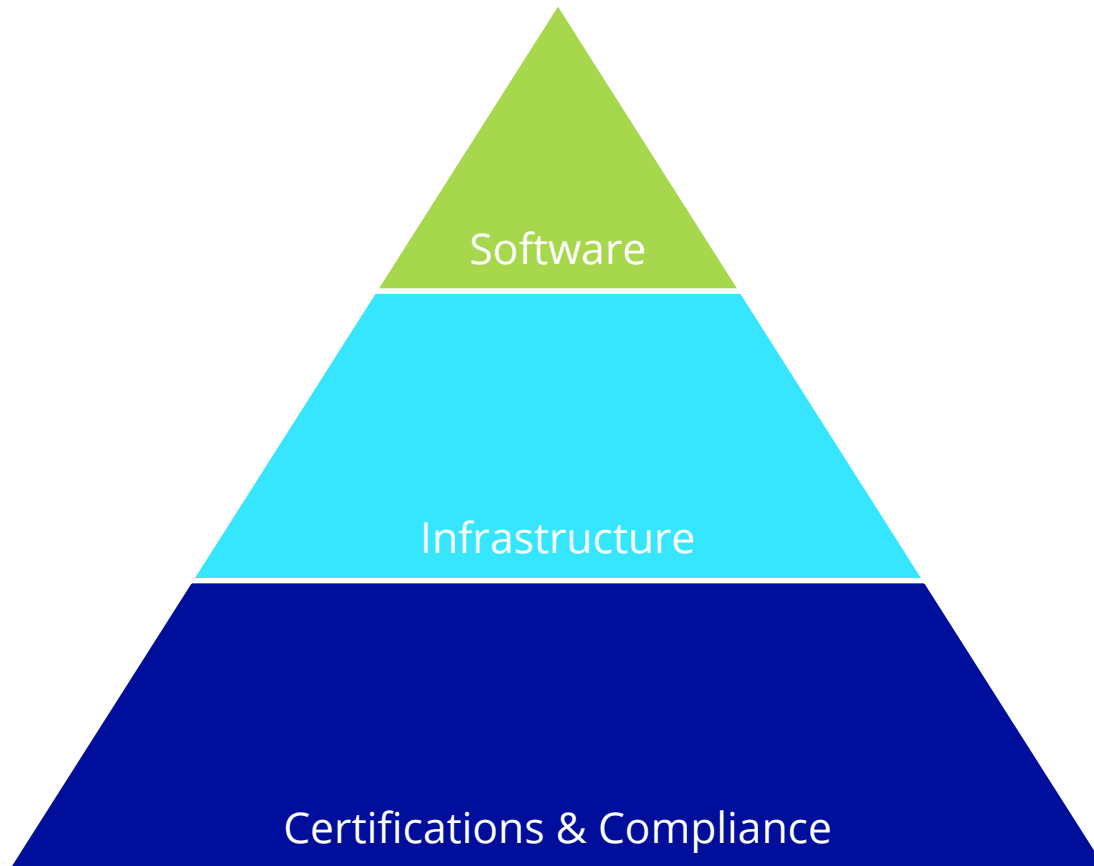
Atos

devoteam

And more..



Secured by design



- ✓ Openstack-based public cloud platform
- ✓ Strong authentications mechanisms (Keystone)
- ✓ Fully managed by OVHcloud (no root access)

- ✓ Availability in multiple regions
- ✓ Clustered and resilient AI services by default

- ✓ ISO27001
- ✓ HDS/HIPAA
- ✓ GDPR



Pay as you go, simple, and aggressive pricing



GRA +
BHS

Object storage

Pay per GB, starting at:

0,01 € HT /month /GB to store
+ 0,01€ HT /GB traffic OUT

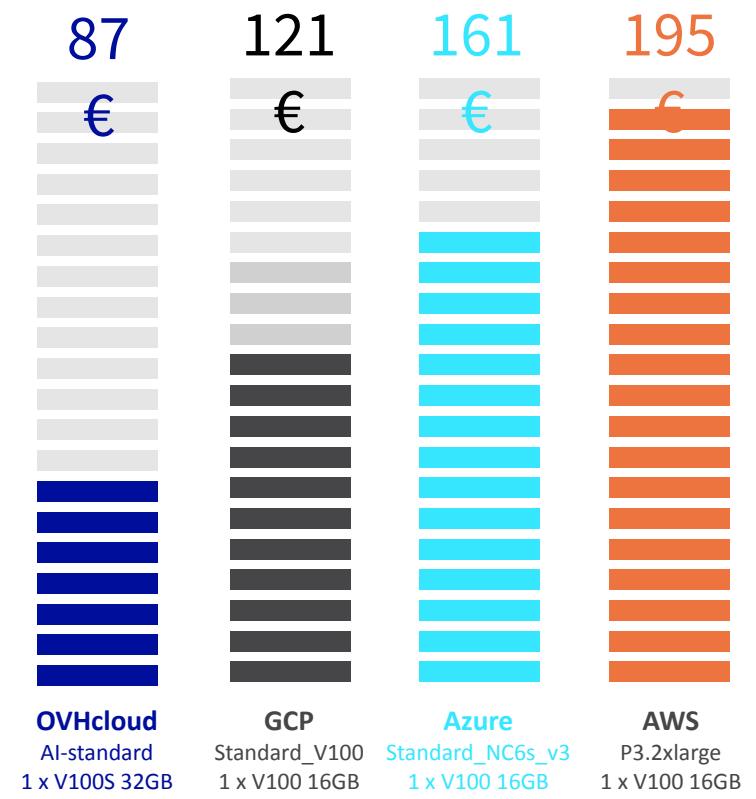
(example: 10TB = 100€ HT/month)

AI Notebooks / AI Training

Pay per GPU per minute, starting at:
1,75€ /hour /gpu (NVIDIA V100s 32GB)

Pay per CPU per minute, starting at:
0,03€ /hour /cpu (Intel Xeon 1vCPU + 4GB)

what's the cost of 50 hours of notebook
with 1 x NVIDIA V100 GPU?



Prices in EU datacenters, without storage attached,
no period commitment.

An answer to many AI questions...

We need to setup / use
AI environments easily
& quickly.
Infrastructure?
Not our job.

Managed services,
no setup cost,
no sysadmin skills
required

Our team needs to
collaborate and have
guaranteed access to
resources.

Object storage
sync & linked
to GPUs or CPUs

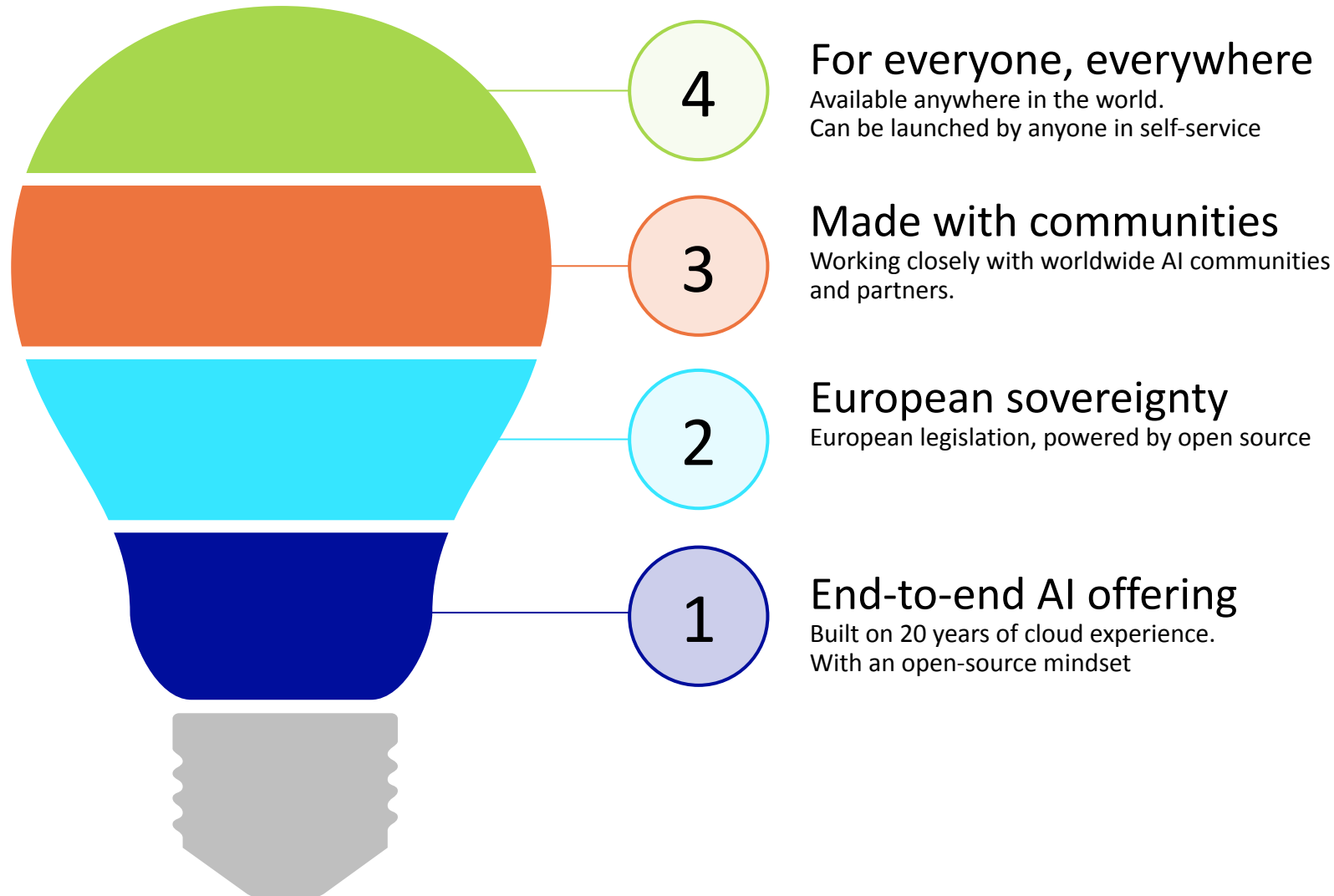
Our needs for
resources are evolving.
We need scalability
and pay as we grow.

Simple & predictive
Pay as you Go
Per minute

How do we guarantee
the privacy, security
and compliance of our
data and models in the
Cloud?

GDPR compliant,
ISO 27K1,
HDS certifications

OVHcloud & AI: sum-up



Some use-cases

Building AI together



Use-case#1: AI for Health Challenge 2020

OVHcloud infrastructure has been leveraged for
two projects in the AI for Health Challenge 2020

ASSISTANCE
PUBLIQUE



HÔPITAUX
DE PARIS

Identify and **forecast** live cancer
diagnosis with **AI algorithms**



institut
Curie

Develop **AI algorithms** to help **therapeutic
decision** to detect **lung cancer**

Partners

Région
île de France

 OVHcloud

medicen | innovation
PARIS REGION for
health

startupinside



16 startups working on
the projects



Isolated/secured data and
compute environment and
additional audit by APHP



Certified **ISO 27k** and **GDPR**
compliant and **HDS, HIPAA**



In line with **limited
budget** leveraging
**high-end AI
infrastructure**



1m€ of reward for the
2 winner startups

Use-case#2: Zaion



Context
Challenges



Products

Context : Zaion is the European expert on customer relationships tools : callbot, welcomebot, Chatbot,

Their main differentiator: Strong accuracy, enhanced feature (detect emotions)

Challenges : lot of data (audio) to play with. Need a lot of GPU power and low latency with their datasets.



Hello, I may have the covid ! What should I do ?



Hello ! First can you describe the symptoms ?



Voice
recognition
(Speech to text)

Emotions
detection

Ansers
generation

Use-case#2: Zaion



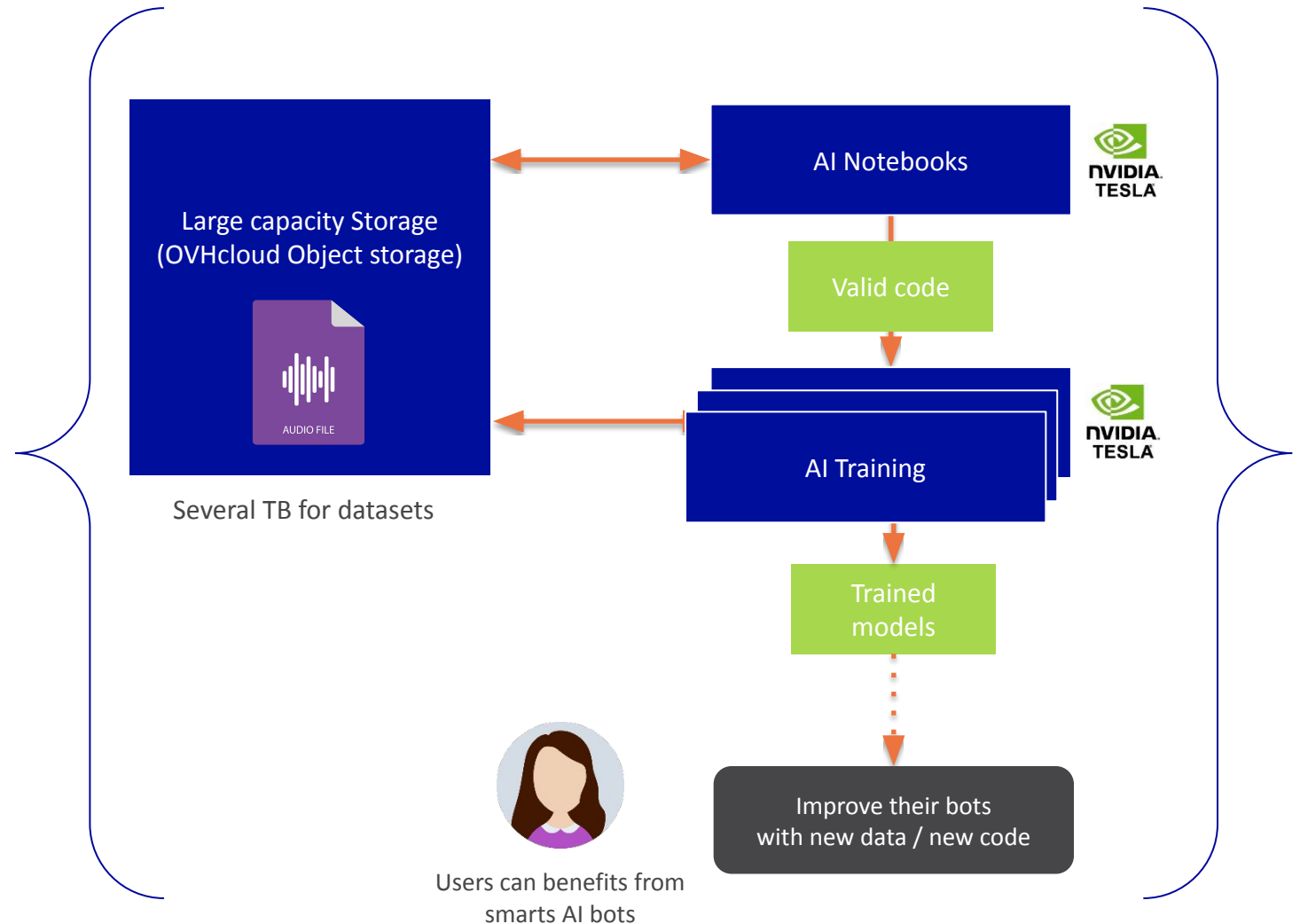
Infra used

- 7 GPUs in parallel
- 20 TB of data



Challenges solved

- ✓ Ability to work on huge datasets
- ✓ Lots of GPU in parallel
- ✓ Low Latency between data/GPUs
- ✓ No more infra to maintain
- ✓ ☐ They gain time



Do you want to know more?

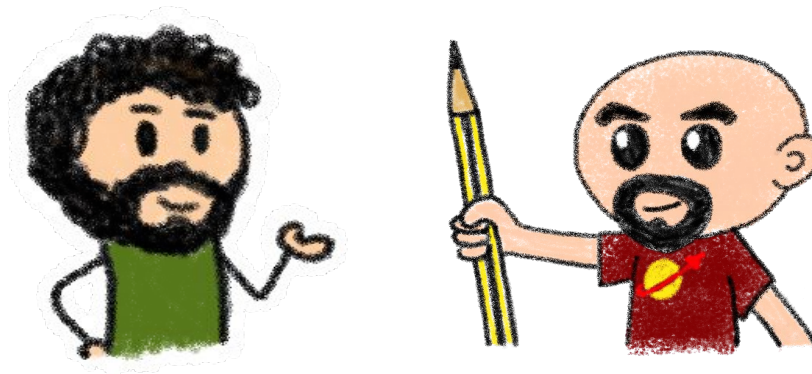


16-17 November 2021



Demo

Let's hope to avoid demo meltdown...



Thank you all!

