AI and Cloud in a sovereign place

Orange Gardens
17/06/2025

$ ldapwhoami

Clément OUDOT
Identity Solutions Manager
Worteks

@clementoudot

LemonLDAP::NG
LDAP Tool Box
LDAP Synchronization Connector
FusionIAM

KPTN
DonJon Legacy
Improcité
Les Amis Causent

Worteks

Open Source software experts and sovereign cloud providers

Actively contributing to numerous Open Source software like LSC, LemonLDAP::NG, LDAP Tool Box and FusionIAM

Partners

Red Hat Advanced Business Partner Reseller

BlueMind

Collabora Online

ONLYOFFICE

Customized solutions

Worteks publishes packaged solutions, entirely composed of Open Source bricks.

These solutions are available On Premise, SaaS or PaaS with our W'aaS offer.

Collaborative platform

Identity and access management solution

Complex infrastructure deployment solution

Yes

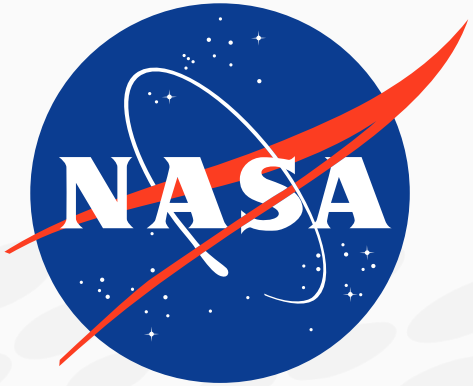
this conference is about

A I


Autonomy
Independance


MAGIC?

Defining Artificial Intelligence



Artificial intelligence refers to computer systems that can perform complex tasks normally done by human-reasoning, decision making, creating, etc.

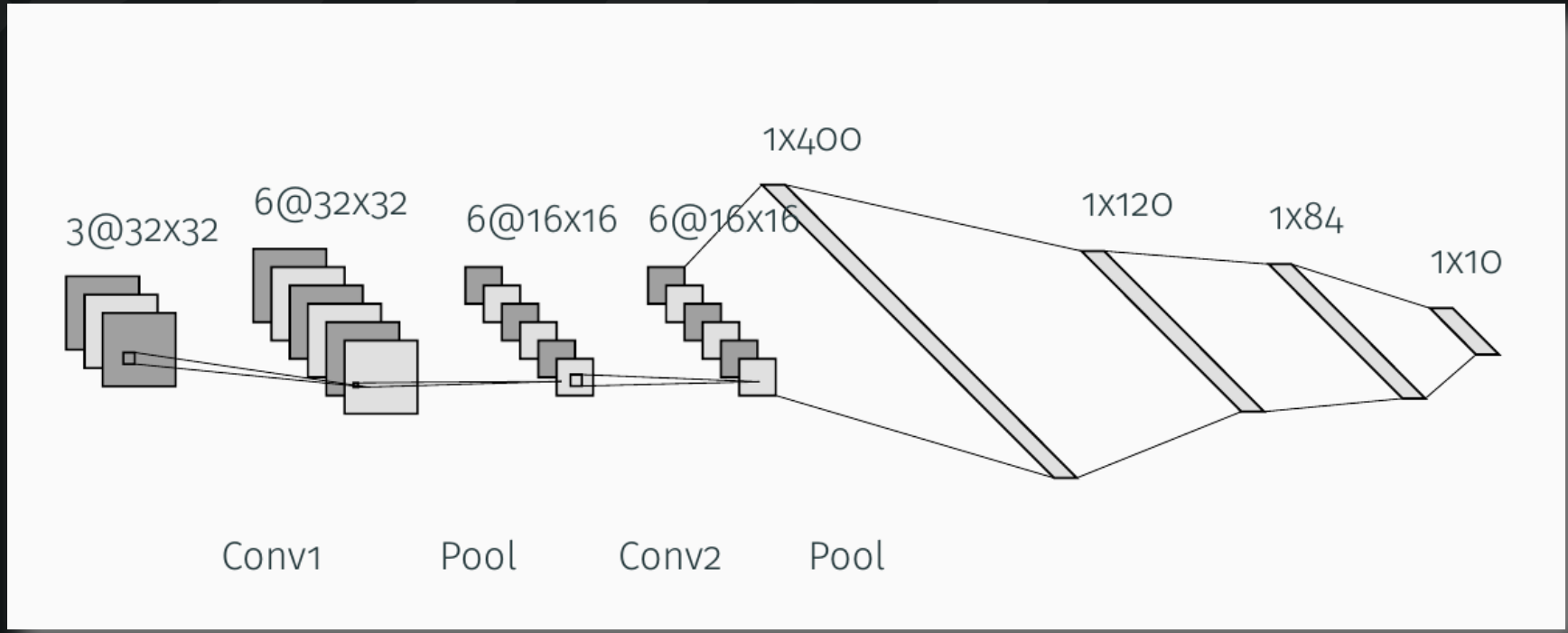
https://www.nasa.gov/what-is-artificial-intelligence/

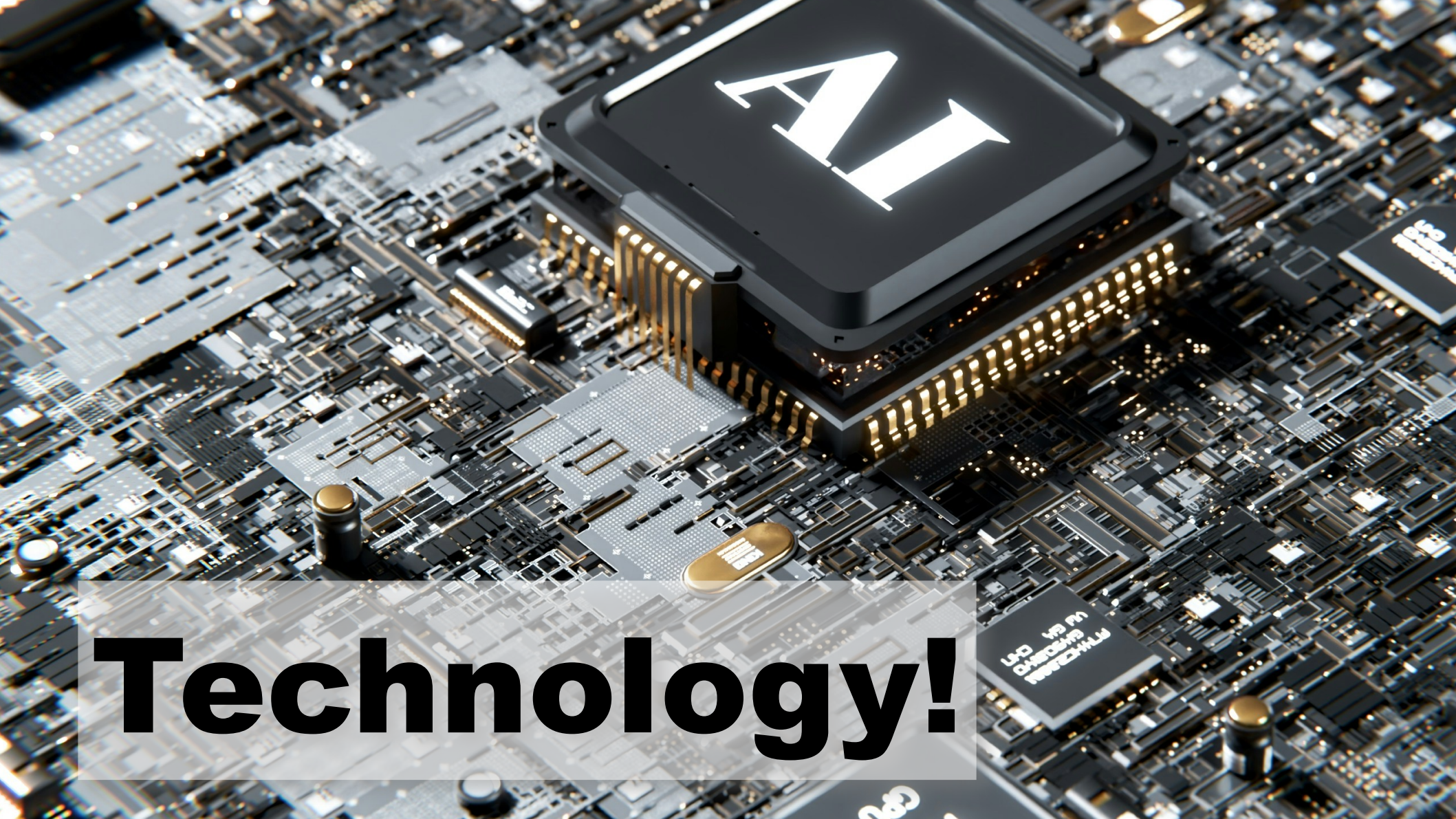
Train a model

```
net = Net()
criterion = nn.CrossEntropyLoss()
optimizer = optim.SGD(net.parameters(), lr=1e-2)

for epoch in range(2):
    for data in trainloader:
        inputs, labels = data
        optimizer.zero_grad()

        outputs = net(inputs)
        loss = criterion(outputs, labels)
        loss.backward()
        optimizer.step()
```

https://xkcd.com/1838/

Artificial neural network





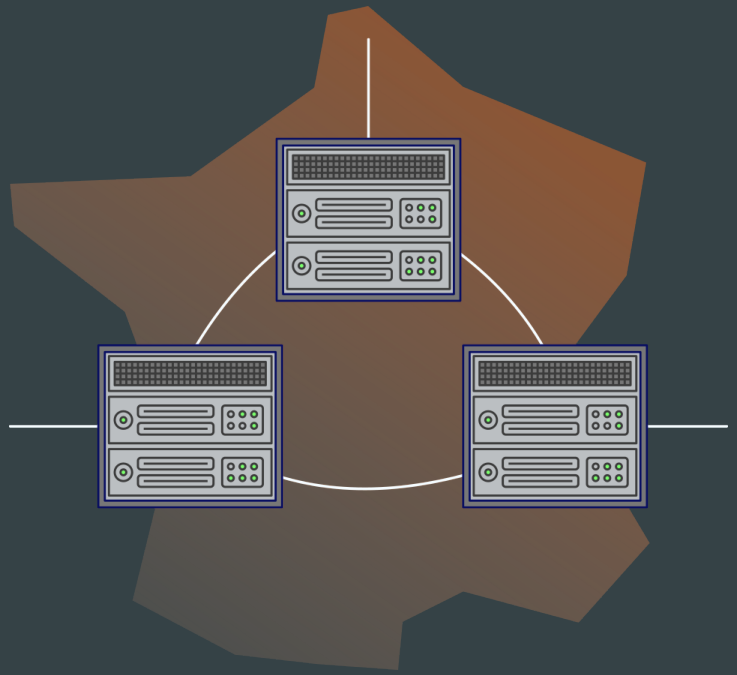
Technology!

W'aaS

W'aaS is a sovereign, managed and tailored hosting offer.

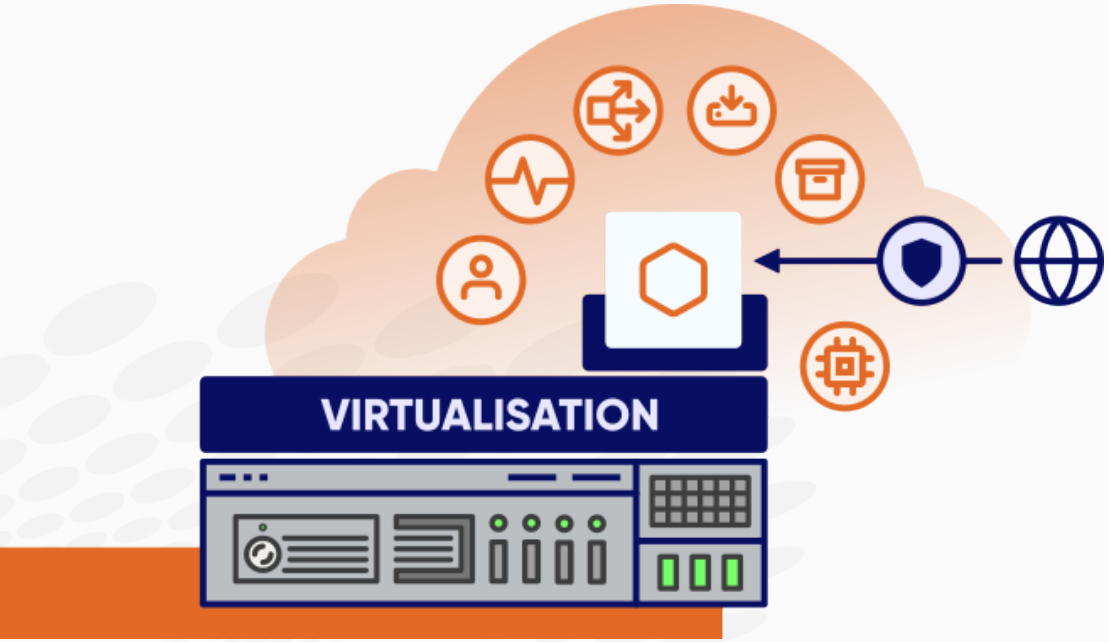
- **Geographical sovereignty**
  Data storage in France
- **Technical sovereignty**
  Open Source building blocks

→ **Digital sovereignty**



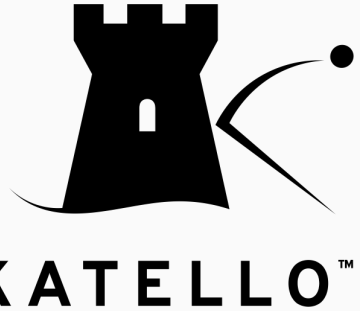
- Private hosting
- Data centers in 3 remote areas
- Privately networked through dedicated optical fiber

Resilience and security



- Monitoring (alerts, status page...)
- Managed secure access (IAM)
- Load balancing
- Redundant daily backups
- 1 week retention period
- Secured internet access
- Computing power (GPU)

Open Source Infra



Open Source AI

slurm
workload manager

OPEN DATA HUB
AI Platform powered by Open Source

Self Hosted ollama

Nouvelle conversation

Recherche

Notes

Espace de travail

Conversations

Aujourd'hui

IAM: Identity & Access Mana

mars

LDAP Directory Management

cleoud

mistral:latest

What is IAM?

mistral:latest

IAM (Identity and Access Management) is a security concept that focuses on the identification of individuals and entities (such as users, systems, or applications), as well as controlling their access to resources within an organization. It ensures that only authorized users have access to specific resources, maintaining security and compliance across systems and applications. This can be achieved through various methods such as user authentication, authorization, identity federation, single sign-on (SSO) and more. IAM solutions are designed to address challenges related to scalability, governance, auditing, and policy management in a multi-platform, distributed computing environment.

Envoyer un message

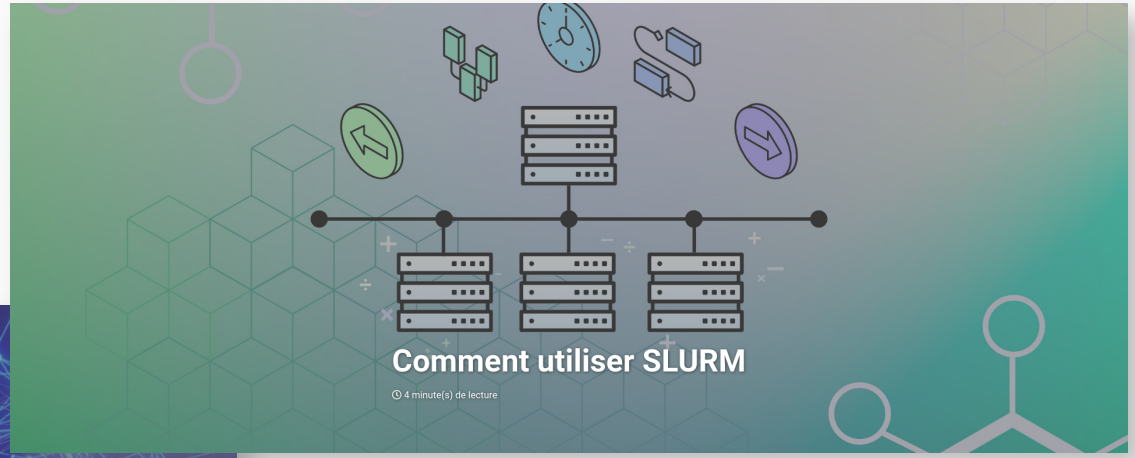
Recherche Web

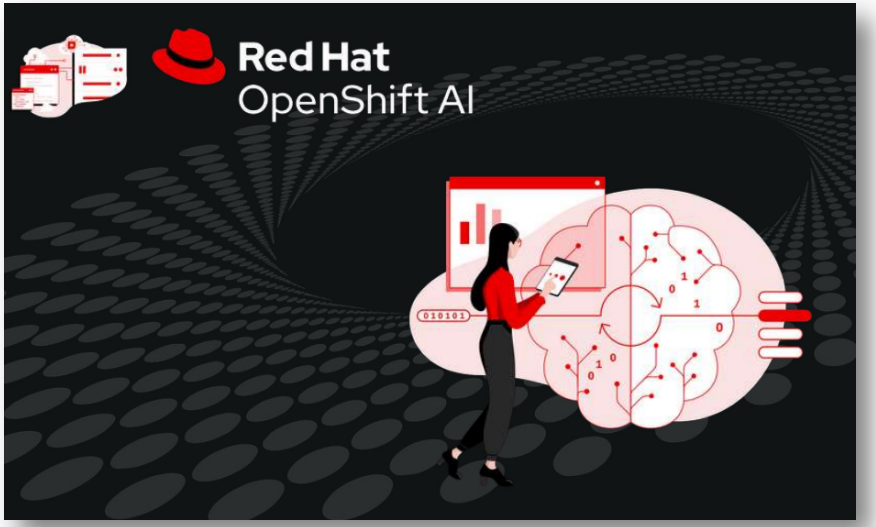
Interpreteur de code

Model training with SLURM


```
vincent@fedora ~> srun --pty --cpus-per-task=1 bash
vincent@fedora:~$ python mnist.py --log-interval=100 --epochs=3
Train Epoch: 1 [0/60000 (0%)]   Loss: 2.329474
Train Epoch: 1 [6400/60000 (11%)]       Loss: 0.174531
Train Epoch: 1 [12800/60000 (21%)]      Loss: 0.150864
Train Epoch: 1 [19200/60000 (32%)]      Loss: 0.210200
Train Epoch: 1 [25600/60000 (43%)]      Loss: 0.088825
Train Epoch: 1 [32000/60000 (53%)]      Loss: 0.139096
Train Epoch: 1 [38400/60000 (64%)]      Loss: 0.088338
Train Epoch: 1 [44800/60000 (75%)]      Loss: 0.105648
Train Epoch: 1 [51200/60000 (85%)]      Loss: 0.118983
Train Epoch: 1 [57600/60000 (96%)]      Loss: 0.163450

Test set: Average loss: 0.0472, Accuracy: 9832/10000 (98%)

Train Epoch: 2 [0/60000 (0%)]   Loss: 0.035192
Train Epoch: 2 [6400/60000 (11%)]       Loss: 0.169961
Train Epoch: 2 [12800/60000 (21%)]      Loss: 0.070159
Train Epoch: 2 [19200/60000 (32%)]      Loss: 0.065903
Train Epoch: 2 [25600/60000 (43%)]      Loss: 0.054197
Train Epoch: 2 [32000/60000 (53%)]      Loss: 0.088051
Train Epoch: 2 [38400/60000 (64%)]      Loss: 0.086651
Train Epoch: 2 [44800/60000 (75%)]      Loss: 0.180965
Train Epoch: 2 [51200/60000 (85%)]      Loss: 0.269220
Train Epoch: 2 [57600/60000 (96%)]      Loss: 0.116651

Test set: Average loss: 0.0366, Accuracy: 9879/10000 (99%)

Train Epoch: 3 [0/60000 (0%)]   Loss: 0.021693
Train Epoch: 3 [6400/60000 (11%)]       Loss: 0.192852
Train Epoch: 3 [12800/60000 (21%)]      Loss: 0.092144
Train Epoch: 3 [19200/60000 (32%)]      Loss: 0.067219
Train Epoch: 3 [25600/60000 (43%)]      Loss: 0.018836
Train Epoch: 3 [32000/60000 (53%)]      Loss: 0.046825
Train Epoch: 3 [38400/60000 (64%)]      Loss: 0.032932
Train Epoch: 3 [44800/60000 (75%)]      Loss: 0.040090
Train Epoch: 3 [51200/60000 (85%)]      Loss: 0.105498
Train Epoch: 3 [57600/60000 (96%)]      Loss: 0.061132

Test set: Average loss: 0.0331, Accuracy: 9880/10000 (99%)

vincent@fedora:~$
exit
```

Want more ?





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Credits

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