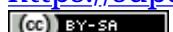


SDD - Data Engineering

<https://supaerodatascience.github.io/deep-learning/>



CLOUD COMPUTING, CONTAINERS & ORCHESTRATION

by a data scientist, for data scientists

ISAE-SUPAERO, SDD, January 2026

Florient CHOUTEAU

WHO ?



- **Florient CHOUTEAU**, SDD 2015-2016 🎉
- eXpert in Artificial Intelligence for Space Systems at **Airbus Defence and Space**
- Computer Vision Team (Earth Observation, Space Exploration, Space Domain Awareness)
- Specialized in Satellite Imagery Processing & Deep Learning
- Daily job revolving around Machine Learning + Satellite Imagery
- Working regularly on cloud infra, remote development environment, docker
- Any question ? contact me on slack !

OBJECTIVES OF THIS CLASS

Introduction to global concepts of cloud computing, virtualisation, containers etc. from a **user** point of view

WHY ?

The building blocks of "AI" ...

- Data
 - Computational Power
 - Software
 - People and skills to make everything works
- ... require a lot of paradigms shifts,

eg. having manipulated and having a rough idea of...

... tools & concepts you **will** need in later workshops (DL, Spark, Dask, Hackathon)...

... tools & concepts you **may** need during your internships and early career...

... *cloud native* culture you **will** need later !

DISCLAIMER !

I am not a Cloud Engineer, or a Devops, ...

... so I'll be showing you these from a "AI Engineer" point of view

... and try to give you pointers for your internship / 1st job ...

... "as if I was the one on the other side of the classroom"

THIS CLASS WILL BE SUCCESSFUL IF...

- You understand why & how the cloud can be useful for you
- You are familiar with remote development environments
- You can connect to and manipulate remote machines
- You know the basics of containerisation and docker
- And you have applied them to deploy your model into "production"
- You have a rough idea of the problematic of orchestration

SCHEDULE

Date Length Content

06/01 3h Intro to Cloud Computing & Remote Dev Env

06/01 3h Containers & Docker

13/01 3h BE Docker & GCP

13/01 3h BE Deploy your ML Model in Production

So day 1 a mixture of lectures and hands-on, day 2 we will focus on practice



Some things may go wrong, especially because of :

- The ISAE WIFI / 4G connection inside the room
- Your computer configuration (OS, browser, etc.)
- Google Cloud Platform responsiveness

Brace yourselves 💪



It works "best" with:

- Google Chrome or Google Chromium. You may need to disable your ad blocker.
- VSCode
- A GitHub account
- A valid gmail address (that you can create for this class)



- This is a beginner class, so your not-so-bad LLM chatbot can do it eyes closed. Use it wisely !
- Tips : Debug mode, Plastic Duck, Learning checker, ...

Speaker notes