# The flow of digital assets Data, Insights, Intelligence, Knowledge

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Introduction and Motivation

The digital portfolio structure

Conclusion



#### Introduction

- Your profiles ? A little survey to start
- ► My profile:
  - Maths & Engineer background
  - ▶ 4 years in Economic & Finance Studies
  - 3 years as Data Scientist
  - Still not a specialist Data Scientist, good enough to get more specialised

#### Context and Motivation

- ▶ The context:
  - Data, Intelligence, Knowledge, Insights, etc are all forms of information
  - The digital revolution has changed the landscape of these digital assets:
    - More tangible, more intergrated, more interactive and more messy
- The motivation:
  - ▶ Discussion to better structure the digital portfolio
  - Discussion about the job landscape changing with the associated digital assets



#### The digital assets (data)

- Data as in IT which is almost everything:
  - ▶ Big data with the 4Vs: volume, variety, veracity and velocity
  - Structured vs Non-structured or SQL vs No-SQL database or CSV vs JSON
  - Good quality and bad quality
  - Machine friendly vs human friendly
  - Raw data vs distilled data (most of the time aggregated data)
  - Internal vs external or private vs open data
  - Storage, Extraction, Search, Data Mining, Data Science
- Of course, there are still a lot of information which has not appeared as IT data form, so out of IT reach

#### Digital assets (intelligence)

- Intelligence is the information whose value lies between data and knowledge. Intelligence is a bit of information by processing data locally. It is actionable but might not able to apply more broadly as knowledge
- ► Intelligence as Machine Learning Model

## Digital assets (knowledge)

Knowledge is a bit of information after processing data across larger domains and through larger time frames. Think of knowledge as scientific knowledge

#### The evolution of digital assets

- ▶ More tangible
- ► More intergrated
- ► More interactive
- ► More messy

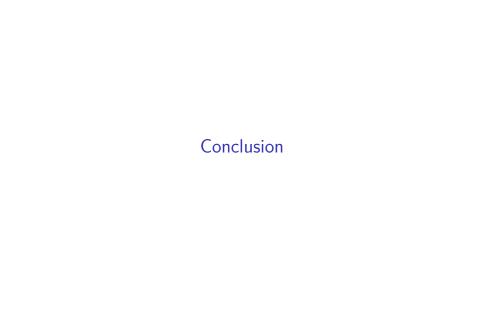
#### Some historical perspectives

- ▶ The whole flow of information processing is not new:
  - ► Story about Copernicus, Galileo, Kepler and Newton: with the telescope and gravitational theory
  - Or Gutenberg with the invention of the printer
  - etc
- ▶ All information now just flows through digital means. Machines are computers, CPU, GPU.

# The flow of digital assets

### The different corresponding jobs

- Data engineer
- ► Data admin
- Data architect
- Data scientist
- ► Data analyst
- Business Analyst
- Project manager



What we are heading to then ?

▶ Humans and machines collaboration to serve human society