



## Synergies between Data and Al



Data and AI are merging into a synergic relationship, where AI is useless without data, and mastering data is almost impossible without AI.



## Al hierarchy of needs

O7 Al Observability

06 Al Deployement

05 Data Science

04 Business Intelligence

03 Data Intelligence

02 Data Engineering

01 Data Acquisition

ML Monitoring, Business Impact, Business KPIs, ML Performance Metrics, ML Health, Data shift, Data & Concept Drift, Model decay, ...

Model Inference, ML Orchestration, Model Serving, Mode Lifecycle Management, CI/CD, Retraining, Refactoring, ...

Al, Deep Learning, Machine Learning, Statistical Modeling, Natural Language Processing, ...

Reporting, Visualization, Advanced Analytics, KPIs Workflow Automation, ...

Data Governance, Data Quality, Security, Data Catalogue, Data Lineage, Stewardship, ...

Data Flows, Pipelines, ETL, EDL, Data Storage Infrastructure, ...

loT, Sensors, ERP, User Data, Social Media, External Data, ...



# What is good data?

### **Dimensions of data quality**

#### **Accuracy**

Data reflects the real world

## **Completeness**

Data as comprehensive as expected

#### **Timeliness**

Data available for use when needed

#### Consistency

• Data consistent across all systems

### Uniqueness

• Each data entry one of its kind

#### **Validity**

• Data still useful or obsolete



# Importance of data quality

## Data quality is often a reflection of the company

Low quality points to poor processes

## Low data quality can lead to massive failure in data initiatives

Low engagement of stakeholders and lack of trust

## Data quality issues can take many different forms

Difficult to have a single one-size-fits all solution

## Root cause is almost always the same

- Low quality implementations
- Inflexible infrastructures
- Bad data governance



Data Governance and Al

## **Data Quality**

Correct, consistent and free of "noise"

## **Data Availability**

Available and easy to obtain

## **Data Usability**

Structured, documented and labelled

### **Data Integrity**

Retains essential qualities

## **Data Security**

Sensitivity, prevents loss and leakage



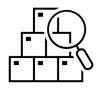


# Al and Data Cataloguing

As Al is useless without data. Handling large and complex data will be very difficult without AI.

Data catalogues powered by AI:

Recommender systems











Automatic data linking

**Error detection** 





Sensitive data detection



## Trends in Data and Al for 2021

There is a lot of momentum from covid

Costumer experience analytics take center stage

Leveraging external data helps outperform competitors

CDO are at the centre of the move to a data driven culture

Data Science is not as sexy as it used to

Data exposes gaps in equity and empowers change