



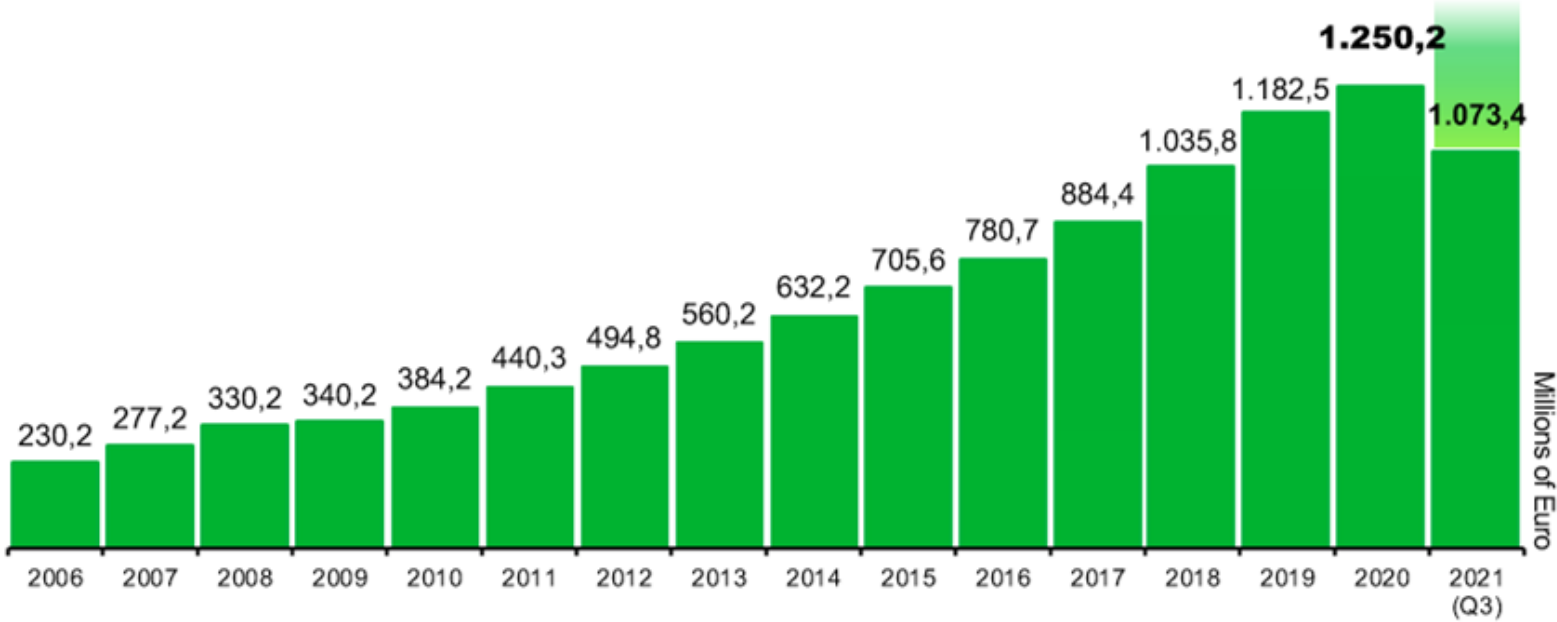
UNIVERSITÀ
DEGLI STUDI
FIRENZE

TARGET REPLY ROME

18 febbraio 2022

REPLY GROUP

REVENUE AND PEOPLE



1925

2272

2686

2994

3149

3422

3725

4253

4689

5245

6015

6456

7606

8157

9059

9880



WHERE WE ARE



REPLY SERVICES

INTERNET OF THINGS



AUTONOMOUS
VEHICLES



INDUSTRIAL
SYSTEMS



CONNECTED
PRODUCTS



ENERGY
ECOSYSTEMS



HEALTHCARE

INDUSTRY PLATFORMS



RETAIL
& CPG



ENERGY



HEALTHCARE



TELECOM
& MEDIA



MANUFACTURING
& LOGISTICS



FINANCIAL
SERVICES

CUSTOMER EXPERIENCE



IMMERSIVE
EXPERIENCE



DESIGN & UX



VIDEO



SOCIAL MEDIA
& STORYTELLING



DIGITAL
ECOSYSTEM

INTELLIGENT
AUTOMATION

DEVELOPMENT
& OPERATIONS

SECURITY
OPERATION CENTER

ARTIFICIAL INTELLIGENCE

CLOUD PLATFORMS

CYBERSECURITY

MACHINE
LEARNING

DATA

SECURITY
CONSULTING



TARGET REPLY ROME

TARGET REPLY ROME

CHI SIAMO

Società del **Gruppo Reply** focalizzata e specializzata nell'implementazione di soluzioni che coinvolgono Big Data e Advanced Analytics.

LA NOSTRA VISION

Ci concentriamo su **soluzioni end-to-end** unendo la nostra profonda competenza tecnica alla nostra conoscenza del business in settori quali: finanza, banca, telecomunicazioni e industriale.

PARTNER TECNOLOGICI



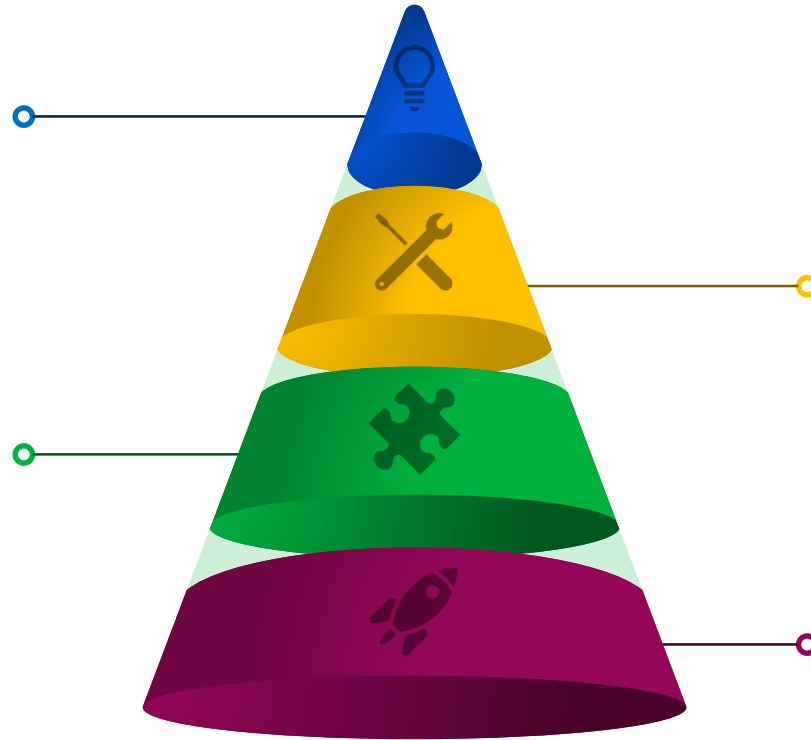
LA NOSTRA OFFERTA

DATA SCIENCE & ANALYTICS

Estraiamo valore dai dati per indirizzare e anticipare le sfide aziendali per poi mettere insieme tecnologia ed esperienza utente per supportare il business nei processi di analisi.

DATA ARCHITECTURE

Adottiamo le soluzioni tecnologiche più innovative ed adeguate al contesto, anche prospettico, del cliente.



DATA GOVERNANCE

Implementiamo strategie e soluzioni per assicurare il giusto controllo e gestione del patrimonio informativo societario.

DATA ENGINEERING

Abbiamo maturato ampia competenza nella realizzazione di soluzioni complesse ed eterogenee di gestione del dato.



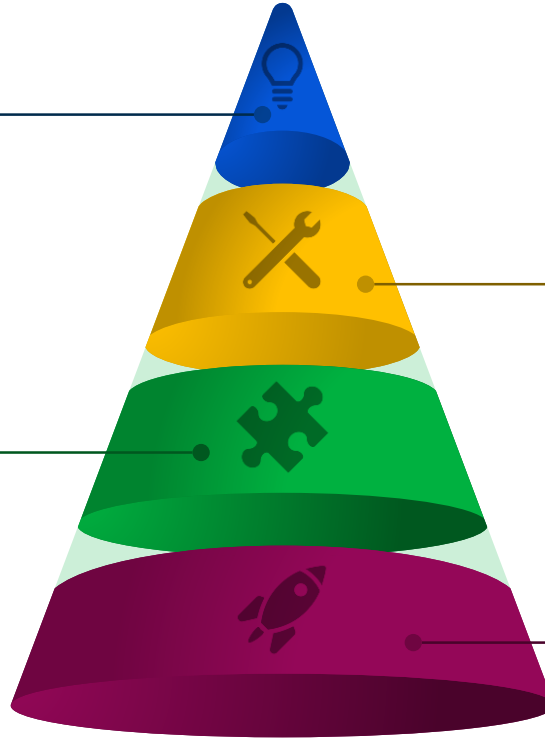
LA NOSTRA MISSION

ADVANCED ANALYTICS & AI

- Machine Learning
- Predictive Modeling
- Stats & Math
- AI automation
- Geo analytics
- Advanced Marketing Analytics

BIG DATA

- Big Data Architectures
- Hadoop No SQL
- Distributed Computing
- Data Quality
- Data Governance



DWH & BI

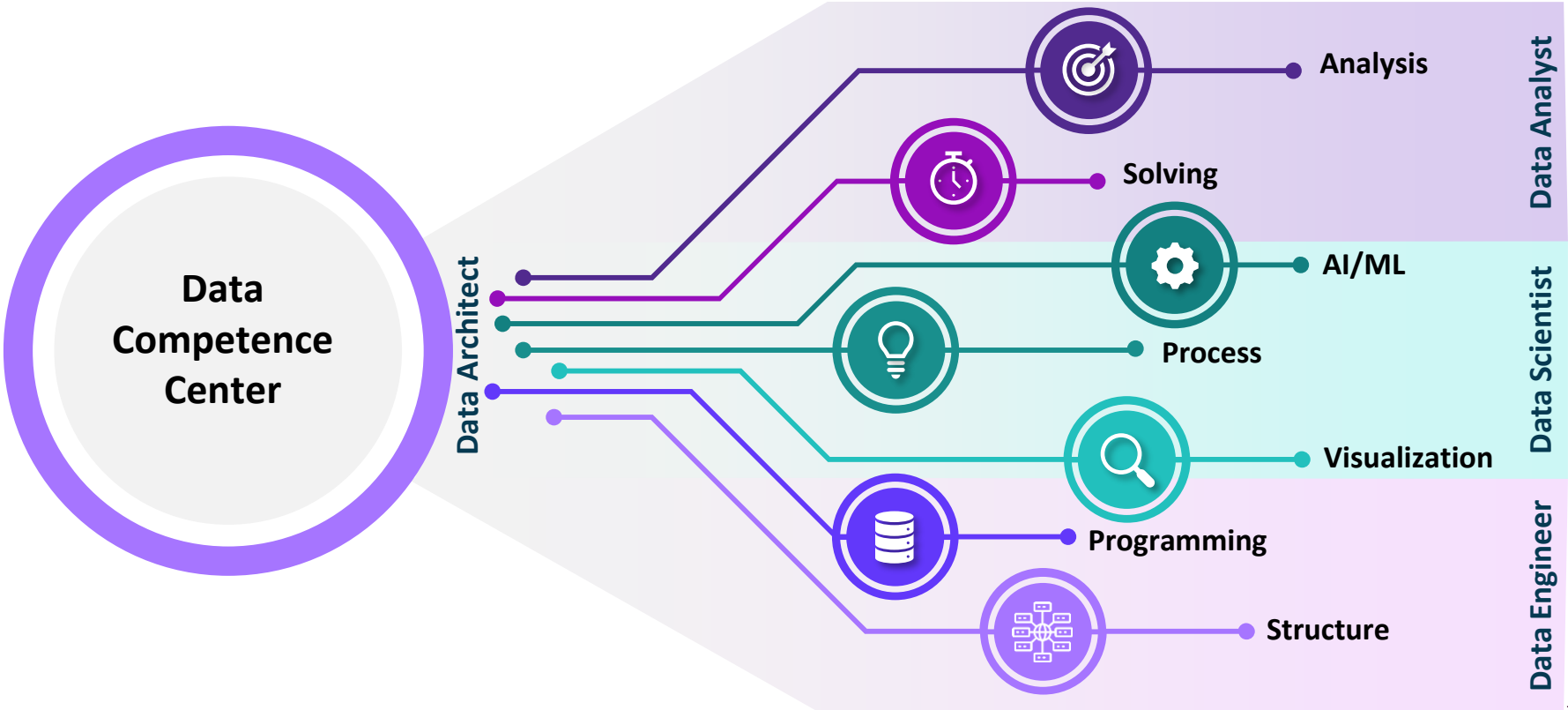
- Data Warehousing
- ETL & DQ Tools
- Business Intelligence & Dashboarding
- Data Governance

DATA COMPETENCE CENTER

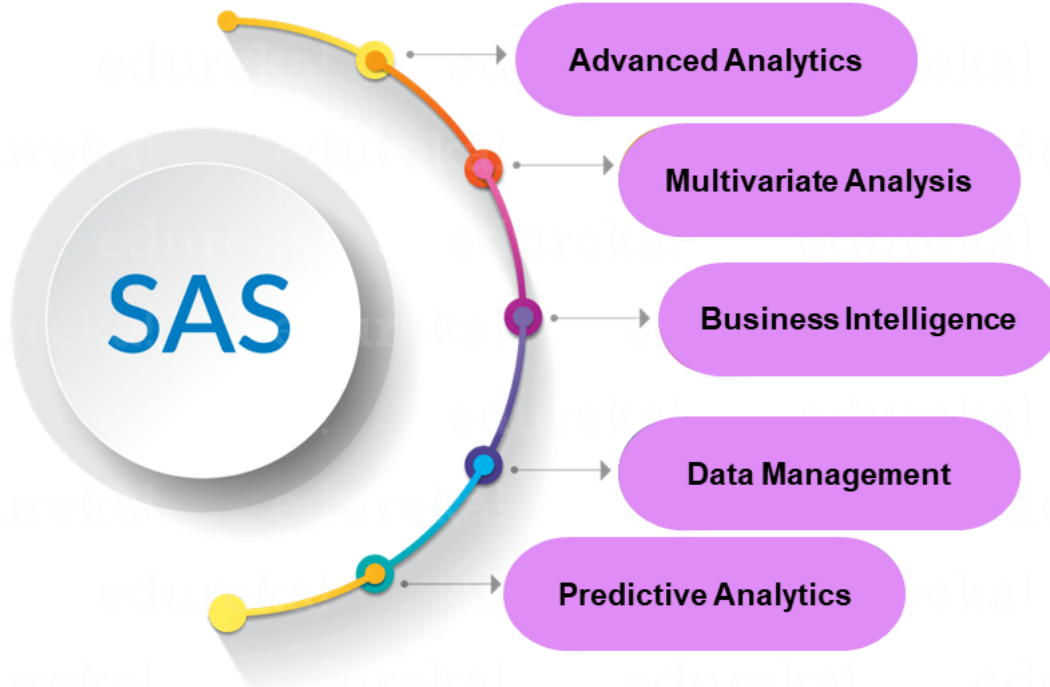
- Data science and big data experts
- Sand box
- POCs, Pilots, Hackatons
- SW selection
- Active collaborations with Universities



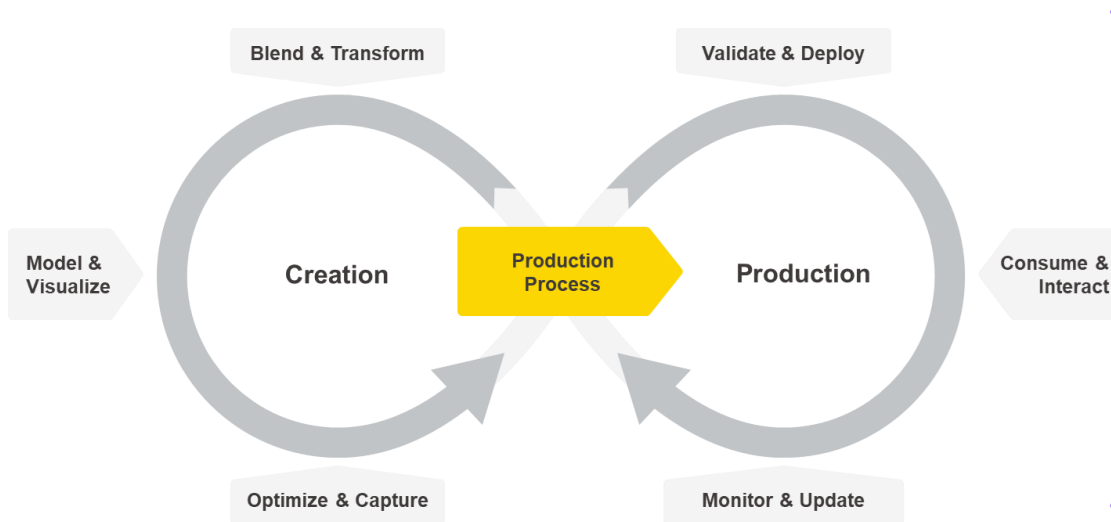
DATA SKILLS



SAS COMPETENCE CENTER



KNIME COMPETENCE CENTER



- Sviluppo modelli ML/AI
- Consulenza
- Formazione e tutoring
- Corsi per la certificazione
- Corsi specialistici

KNIME Analytics Platform

KNIME Extensions

KNIME Integrations

Community Extensions

Partner Extensions

KNIME Server

Team Collaboration

End User Applications

API Services

Managed Execution



WEBINAR

Swarm Robotics Platforms



SEP 7, 2020

DATA SECURITY

WEBINAR (Lingua italiana)

29 luglio 2020 | dalle 12:00 alle 13:00

RIPARTIRE DAI DATI.
COME (RI)AVVIARE IL
BUSINESS
CON LA DATA
VIRTUALIZATION

Open for Innovation
KNIME

MACHINE LEARNING
DATA SCIENCE
Meetup

DEDIV

A HUMAN MOBILITY
IN A NEW REAL TIME
WORLD

ENGLISH
May 21, 2020 | from 4:00 PM to 4:45 PM CEST

GET IN TOUCH TO KNOW MORE

LABCAMP

SENTIMENT ANALYSIS
FOR A REAL TIME

ITALIAN
July 23, 2020 | from 2:30 PM to 3:30 PM CEST

WEBINARS

BUILD AN INTELLIGENT
TICKET MANAGEMENT

Webinar (English Language)
10 July | 2.30pm - 3.15pm CEST



[L1-DS] Data Analytics
Platform for Data
Scientists: Basics - Online

Aviation on the Cloud

ONLINE



OCT

CORSI



ONLINE

Machine Learning Challenge
with KNIME

ONLINE

THESIS PROPOSALS 1/2

AI/ML/DL FOR SMART FARMING

The aim of the thesis is to develop AI/ML/DL models of Smart Farming sector, for solving problems like plants development, plants pathogen detection and many other



ML/NLP FOR BRAND REPUTATION

The aim of the thesis is to develop a stack of ML/NLP models able to provide, with high accuracy, sentiment, topics and brand reputation based on the analysis of articles, post, tweets and any other textual information related to a brand/company and its products/services.



VIDEO ANALYTICS FOR SMART CITIES

The aim of the thesis is to develop video analytics models able to detect in real time dangerous situations, crowd management, movement in unwanted or prohibited areas, and similar



PREDICTIVE MAINTENANCE

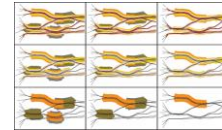
The aim of the thesis is to develop deep learning models able to detect, with high accuracy, anomalies and failure patterns and provide early warnings based on data collected for an extended period to observe the system throughout its degradation process.



THESIS PROPOSALS 2/2

TRAJECTORY CLUSTERING

The aim of the thesis is to develop unsupervised, supervised and semi-supervised trajectory clustering models of GSM/WiFi data for solving generic tasks like object motion prediction, traffic monitoring, activity understanding, or abnormal detection.



PASSENGERS FLOW FORECASTING

The aim of the thesis is to develop a forecast model able to provide, with high accuracy, the passengers flow in an important infrastructural node (like a large station, or an airport hub), with fine time granularity (5-10') and short-term forecast windows (7-30 days), based on internal/proprietary and open/social historical data.



IOT PREDICTIVE MAINTENANCE

The aim of the thesis is to develop a predictive model able to provide, with high accuracy, the (probability of) fault of a set of hardware components in a (very) large communication network infrastructure, based on IoT sensor data and other data considered useful for the task.



ARRIVAL MANAGEMENT

The aim of the thesis is to develop a forecast model able to provide, with high accuracy, the airplane arrival at the airport, with fine time granularity (1-5') and short-term forecast windows (7 days), based on internal/proprietary and open/social historical data.



REPLY BENEFITS



Certificazioni



Momenti
ricreativi

Smart Working



Corsi di Lingua
e
attestati IELTS

speexx



Use Case Multiple Object Tracking with Multiple Cameras



Our Target

Track multiple person in different or similar places. Use network of cameras in order to make our tracking algorithm more robust and precise.

How?

Using a combination of Detection and Multiple Object Tracking (MoT) algorithms distributed over several cameras.

Combination of libraries

- **DETECTION:** YoloV5
- **TRACKING:** DeepSORT
- **OTHER:** TorchReID



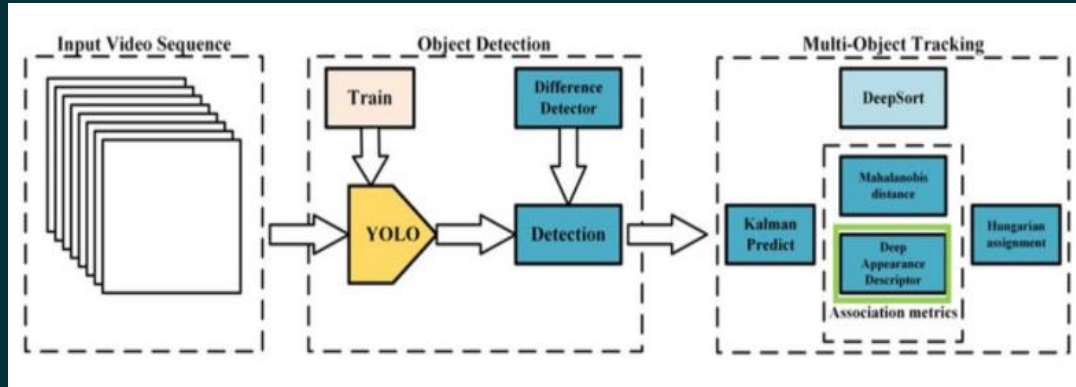
cam #1



cam #2



How our Multiple Object Tracking works?



DeepSORT Features

- Kalman Filtering
- Hungarian assignment
- CNN as association metrics

The combination of these features make DeepSort a precise tracking algorithm.

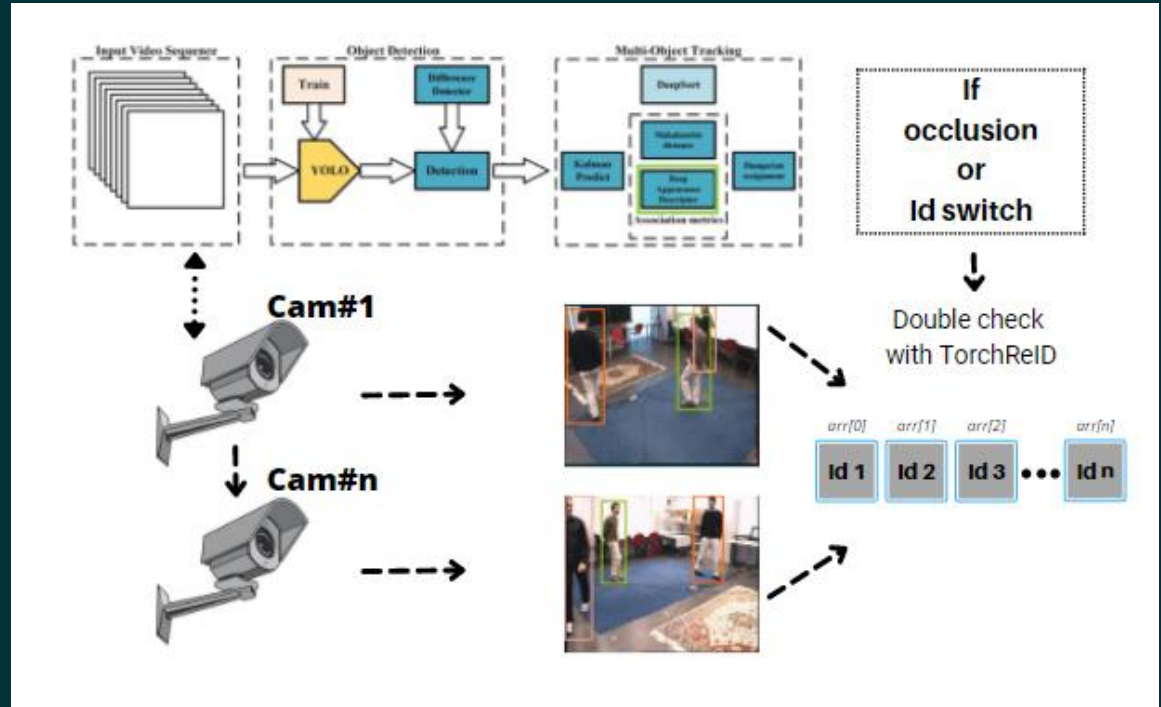
TorchReID

- Integrate OSnet
- More robust Re-ID
- One of the most lightweight and performing CNN.



Camera Networks Setup

- 1) Multiple camera streams video on backend
- 2) Video sequence are passed to YoloV5 detection
- 3) Bounding Box detections are passed to DeepSORT
- 4) DeepSort assign IDs to all new BBox
- 5) If there are occlusions of some id switch, we compare feature vector of previous sequence with the last one in a data structure with TorchReID



Put Everything Together



cam #1



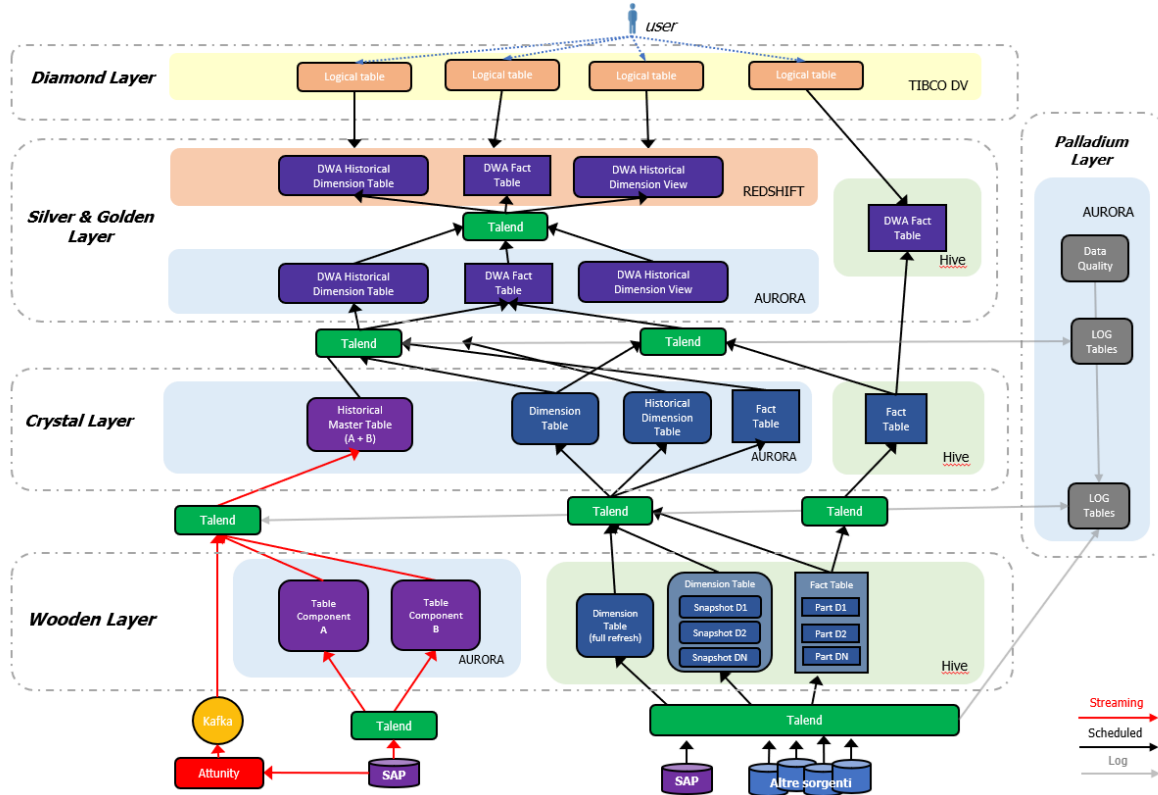
cam #2



Use Case Enterprise Data Platform



ENTERPRISE DATA PLATFORM



Data Virtualization per l'utente fruitore



Arricchimento ed aggregazione dei dati



Pulizia e filtraggio dei dati di input



Data ingestion da sorgenti esterne su Aurora/Hive



COP

Quantum

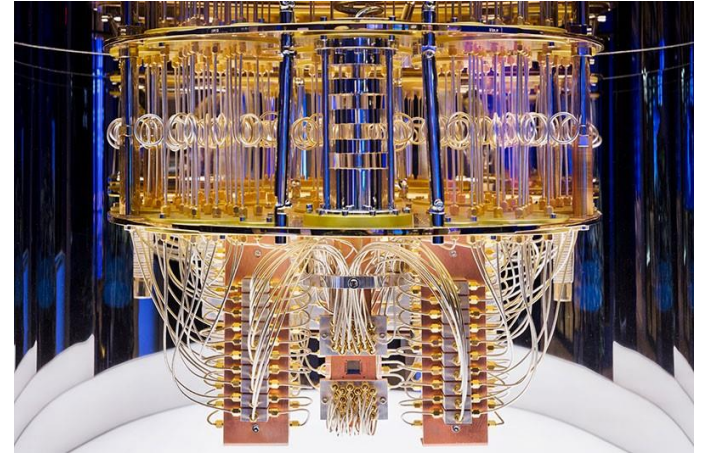
Computing



COP QUANTUM COMPUTING

Lo scopo della COP Quantum Computing è quello di maturare esperienza e riuscire a padroneggiare l'argomento ad un livello tale da poter offrire in futuro delle soluzioni per un cliente.

L'idea alla base del QC è quella di sfruttare i principi cardine della fisica quantistica, l'*entanglement* e la sovrapposizione, per risolvere i problemi non risolvibili con i computer classici.



Q&A



CHALLENGE



CHALLENGE

Cliccate sul link seguente (che trovate nella chat Teams):

https://kahoot.it/challenge/0646504?challenge-id=dd01bb5c-7ac4-4f04-9263-33041b30f3d0_1645181984276



Inserite il pin: **0646504**



<https://www.reply.com/target-reply/it/>

info.targetrome@reply.it