a.Data Analytics in Consulting

Reply Ecosystem

Biggest Italian system accelerator, based on computing engineering. Group with different small companies. This to be fast and give the costumer the newest innovation at the moment. Focus on various vertical solution and orizontal layers. Maintain companies small to have people focused on specific topics of computer engineering and having a lot of these small companies.

Data Framework

Without data you are just another person with an opinion.
Data changed everything. Big data refers to huge amount of volume of structure data. Big data is the fuel for analytical jobs(Image, Machine Learning, etc...).
Buzzword: CloudEra, Hadoop
Machine Learning was the biggest eye and evolution in 2015, no ecosystem ready to be the table where data science can operate.
Buzzword: Clustering, RL, Neural Networks.

Cloud

Then service models arise with the availability of cloud services. End user can utilize the service he want without worrying about the setup. No initial focus on data-layer. Not thinking where the dataset are coming, how they are cleaned.
Buzzword: AWS, GCP, Azure, As a Service.

Generative AI

Accelerator of everyday life. From simple prompt you can arrive to complex API or programs.
Buzzword: Open AI, LLM, Synthetic Data(Fake dataset, best surrogate of the original dataset, one way to generate data without corresponding to original data, utilised to not violate GDPA rules, the more synthetic the more it isn't reliable), RAG(Retrieval Augmented Generation, intersection between machine learning models and technologies, how companies are fuelling ML models API).

Data Framework

Usually companies structure their data with:

- Operational data: data that the company prepares to analyse and scrutinise
- Data Layer and Cloud: divide data in layer
- Ingesture protocol: data begin to be ingested in the machine learning models.
- Data Analysis and Machine Learning

- Data Discovery and Virtualization

High Level Architecture

Consumer: everyone that access your data. Cannot make a huge investment if you cannot debug, manage and develope your ecosystem.

Data Job Roles

- Data cloud Architect: figure that design and create the data architecture, put in place services, rules and infrastructure the company will use. All the big decisions come from them.
- Data engineer: figure that implements all the structures and architectures/infrastructures.
- Data analyst: bridge between management and IT guys. They focus on interpret data
- Data scientist: use various techniques to extract information from data
- Data privacy & security: he is responsible of reassuring that everything in data is reliable and respects laws. The data security role regard the security of what it is inside the data.

Consulting Path

After some years in becoming the guru of a fields it is ideal to expand your knowledge in others fields.