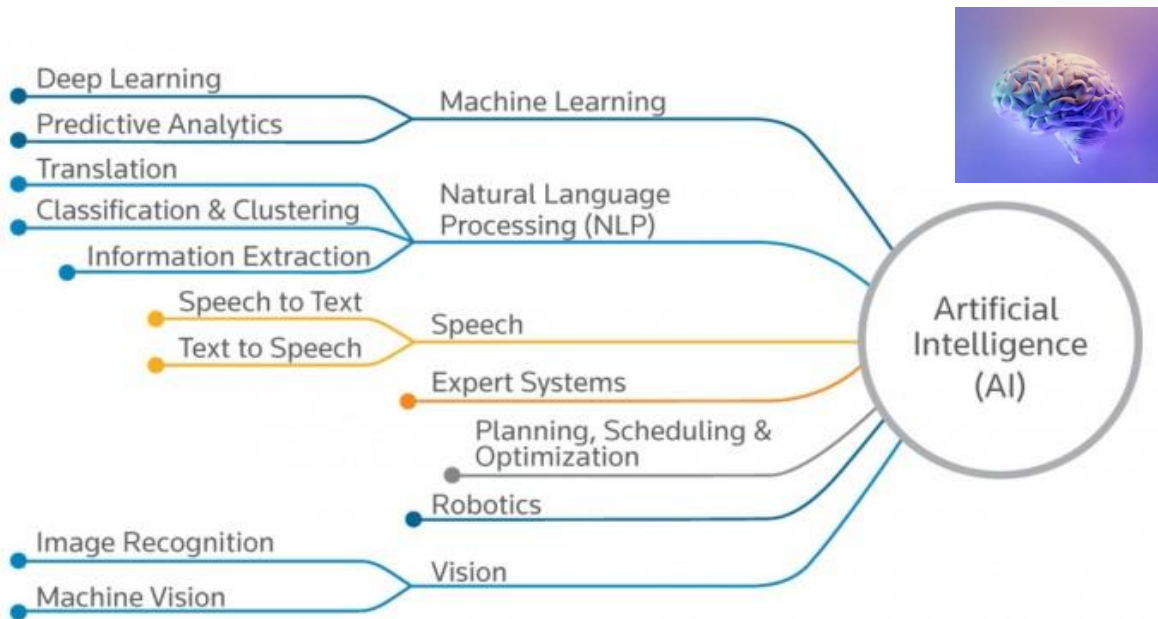




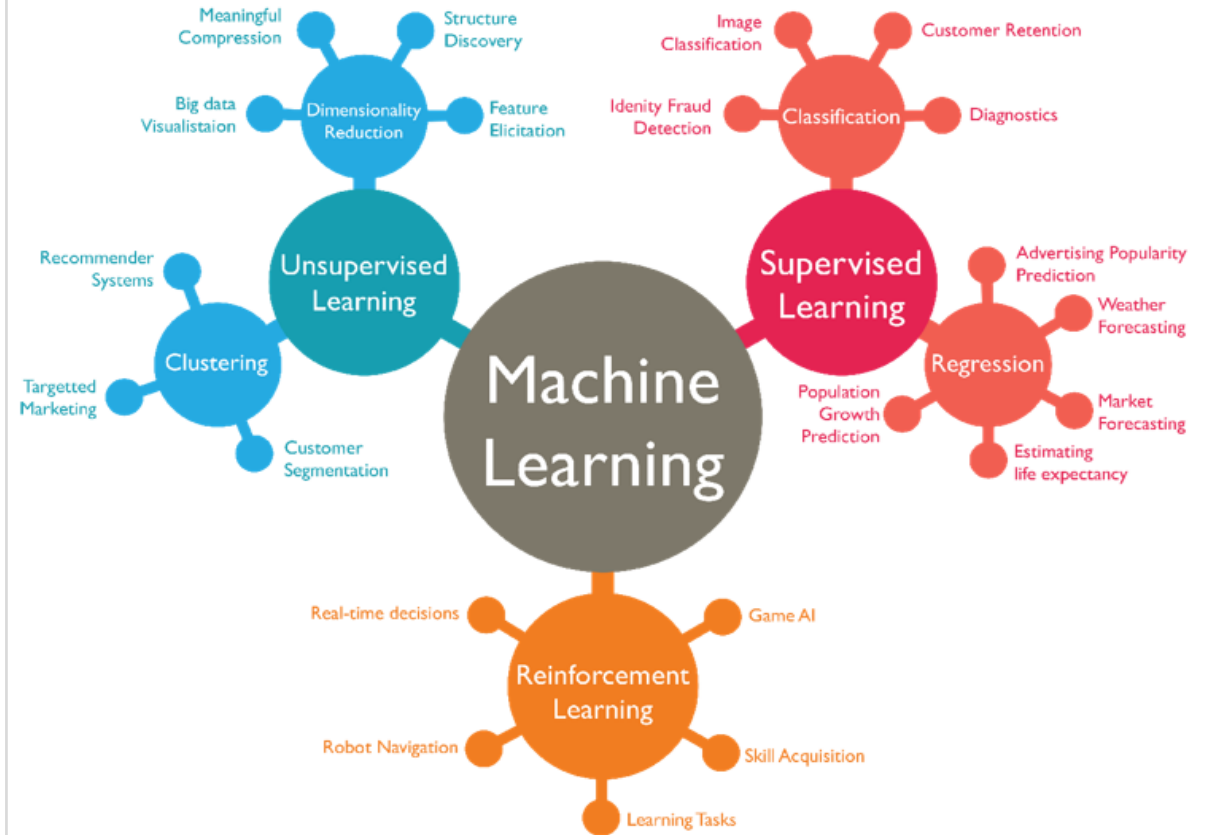
Artificial Intelligence & Machine Learning

AI Applications



Predictive Intelligence Behavior Prediction	Cognitive Intelligence Diagnostics & Resolution	Interactive Intelligence Assistants & Chatbots
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ML Applications



Source: Hamza Jaffali, Medium, 2023



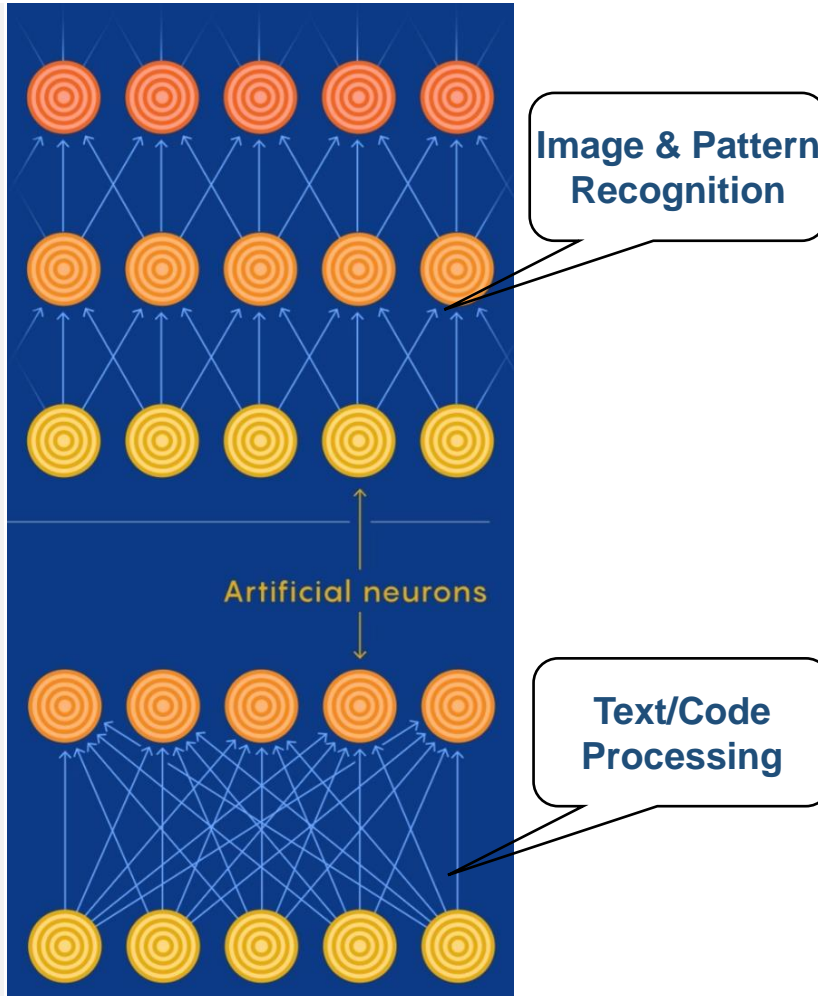
Convolutional & Transformer Neural Networks

Convolutional Neural Networks (CNN)

A CNN repeatedly filters small portions of an image, using mathematical computations to map features and build up a fuller, more complex picture

Transformer Neural Networks

A transformer instead starts by connecting every element to every other element, creating a global, if incomplete, representation from the first layer



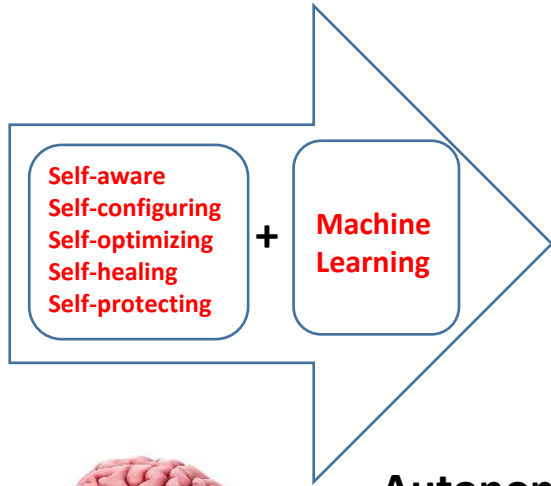
Interactive AI could bring disruption in several Telco business functions, such as:

- customer service*
- sales*
- marketing*
- network management*
- fraud detection*
- network slicing*

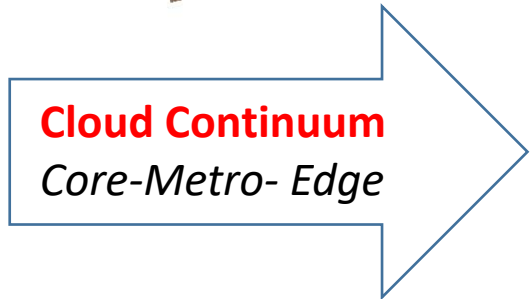
Source: Global Data, 2023



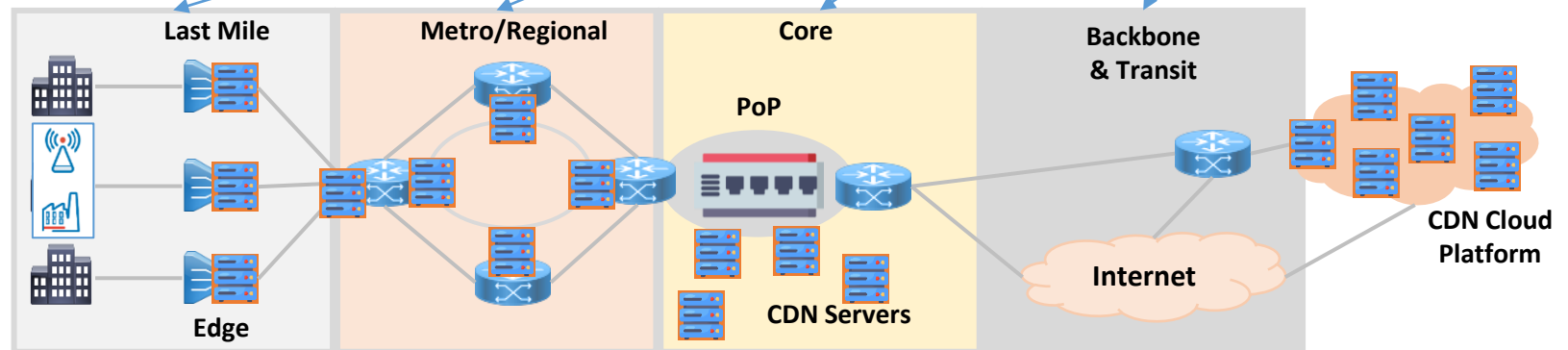
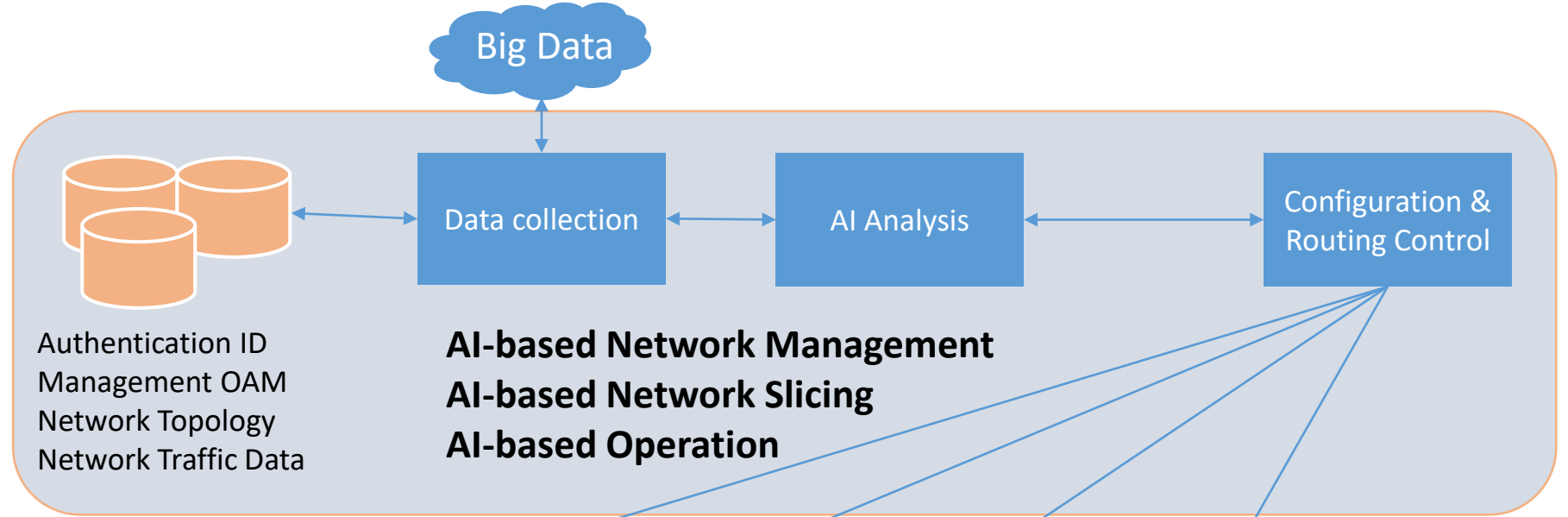
AI-Based Network Management & Operation



**Autonomic
Cognitive
Operation**



**Telco
Network**





Edge Computing Applications

- **Network Performance and QoE improvements**
 - **Content Delivery & Caching** (high QoE)
 - **Performance Optimization: Protocol Accelerators** (lower network bandwidth cost)
- **Consumer-oriented services**
 - **Augmented and Virtual Reality** (low latency, high performance)
 - **Gaming** (low latency, high performance)
- **Operator and third party services**
 - **Big Data & Artificial Intelligence services** (local data storage – via blockchain records - & AI processing towards core application)
 - **Enterprise services** (managed services)
- **5G IoT Vertical Markets**
 - **IoT Gateways**
 - **IoT Connected Cars** (low latency)
 - **IoT Smart Environment** (big data volumes)
 - **IoT Industry 4.0** (low latency)
 - **IoT Drones** (low latency)
 - etc.