

The background is a dark blue gradient with faint, light blue geometric patterns. These patterns include several concentric circles of varying sizes, some with dashed lines, and a large circular scale on the left side with degree markings from 140 to 260. Small arrows and dots are scattered throughout the design.

WHAT IS ARTIFICIAL INTELLIGENCE ?

BY

JOHN SYLVESTER

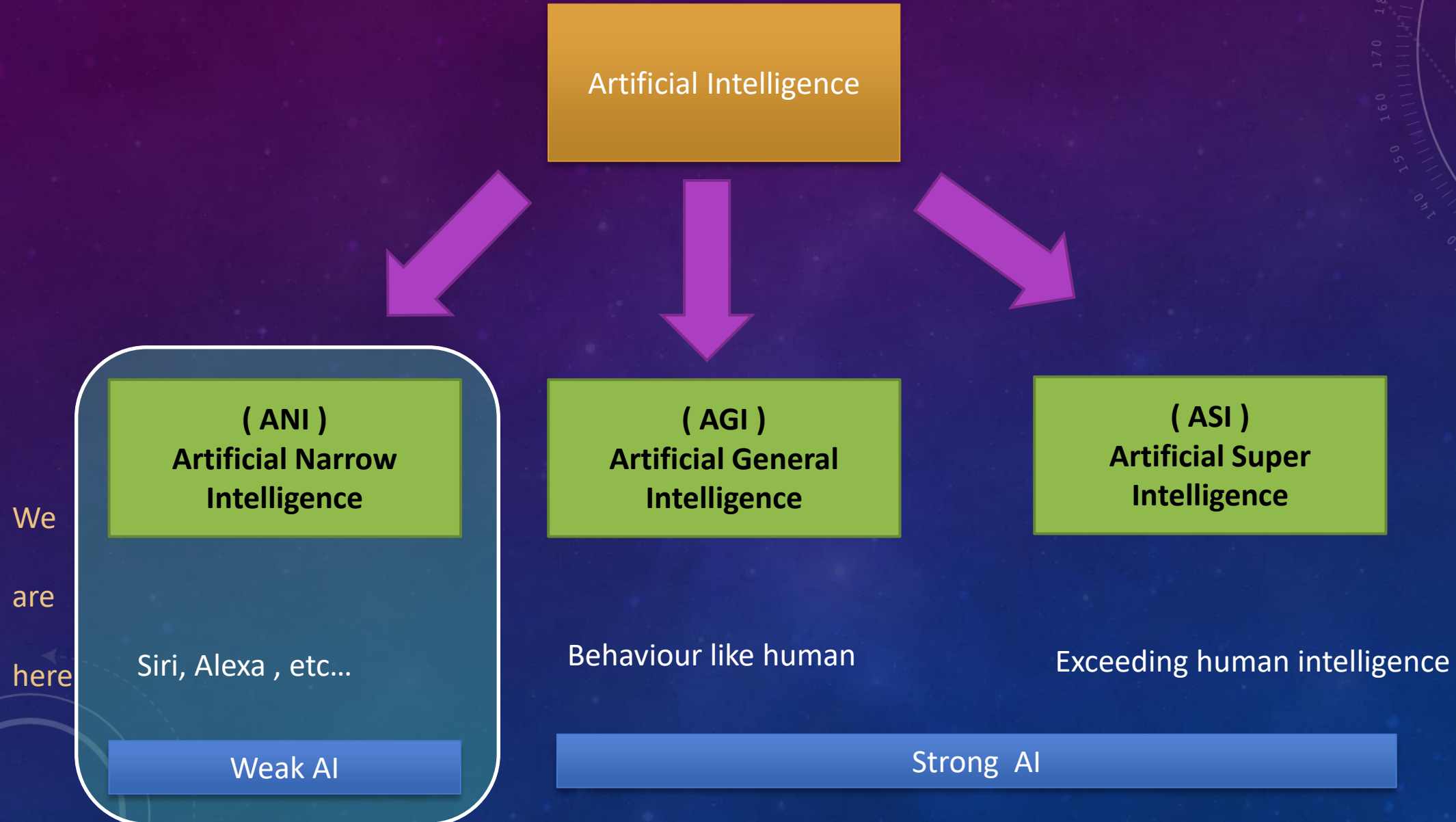
Architecture & Design

People & Process

Infrastructure
& Technology

Artificial
Intelligence

AI : any human-like intelligence exhibited by any machine



AI : Its already here

Applications :

1. Speech recognition
2. Natural language processing (NLP): digital assistants (Siri and Alexa), chatbots
3. Image recognition (computer vision or machine vision): Identify and classify objects, people (google photos)
4. Real-time recommendations: Retail and entertainment web sites (amazon Website)
5. Virus and spam prevention
6. Automated stock trading
7. Ride-share services: Uber to match up passengers with drivers to minimize wait times and detours
8. Household robots
9. Autopilot technology

AI : Learns from data

Structured Data - Relational / SQL Databases

	Station	Year	Month	Day	Daily Rainfall Total (mm)	Mean Temperature (°C)	Maximum Temperature (°C)	Minimum Temperature (°C)	Mean Wind Speed (km/h)	Max Wind Speed (km/h)	Date
1525	Changi	2009	1	5	0.2	27.0	30.9	24.5	7.2	25.6	2009-01-05
1524	Changi	2009	1	4	1.5	26.3	29.7	24.5	4.5	25.2	2009-01-04
1523	Changi	2009	1	3	0.0	26.5	29.6	24.5	6.2	34.2	2009-01-03
1522	Changi	2009	1	2	0.0	26.4	29.7	23.2	5.1	25.2	2009-01-02
1521	Changi	2009	1	1	36.0	26.6	31.3	24.0	2.0	25.2	2009-01-01

Un Structured Data – NoSQL Databases



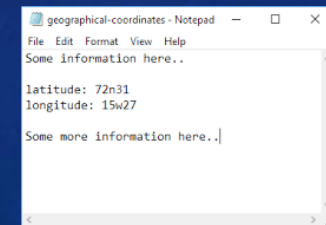
Video



Image

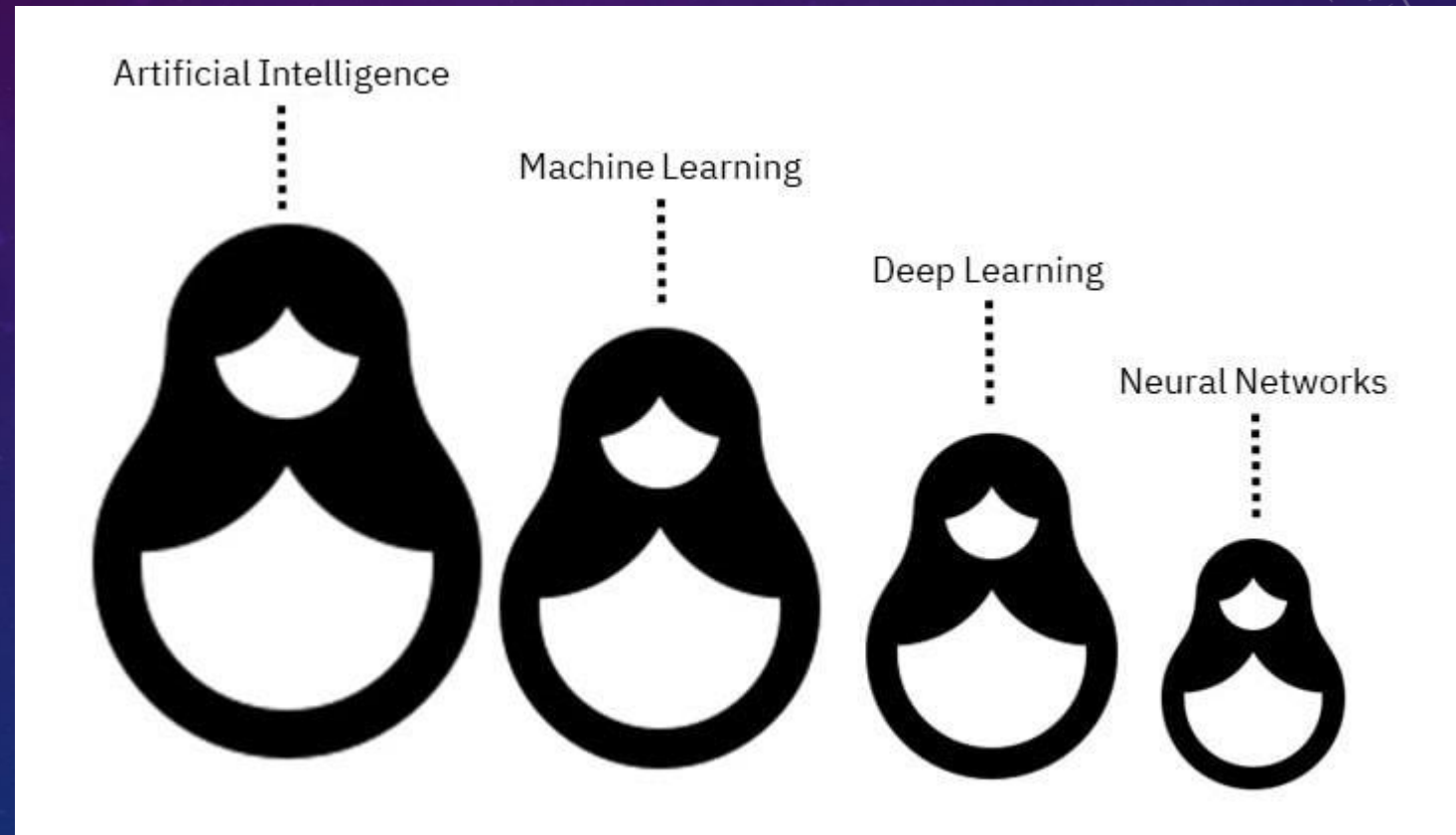
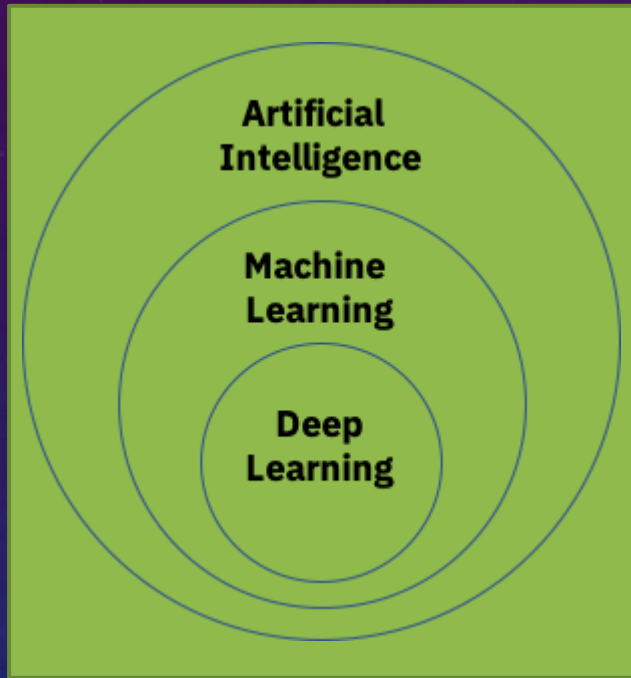


Audio

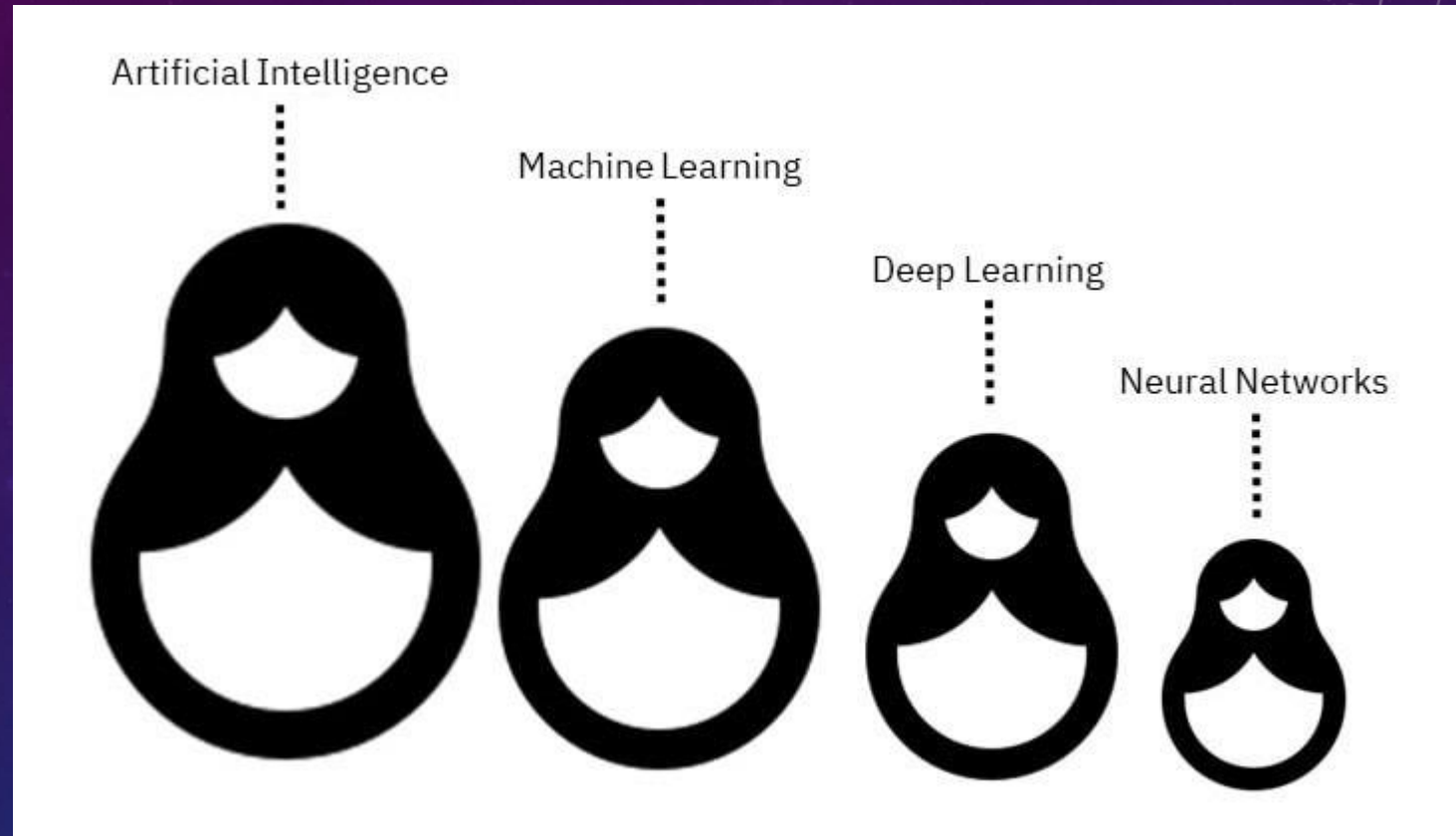
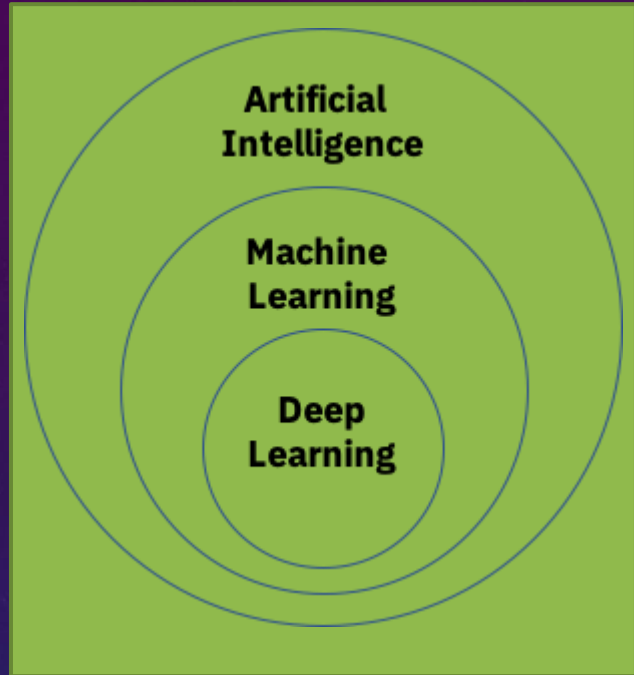


Text

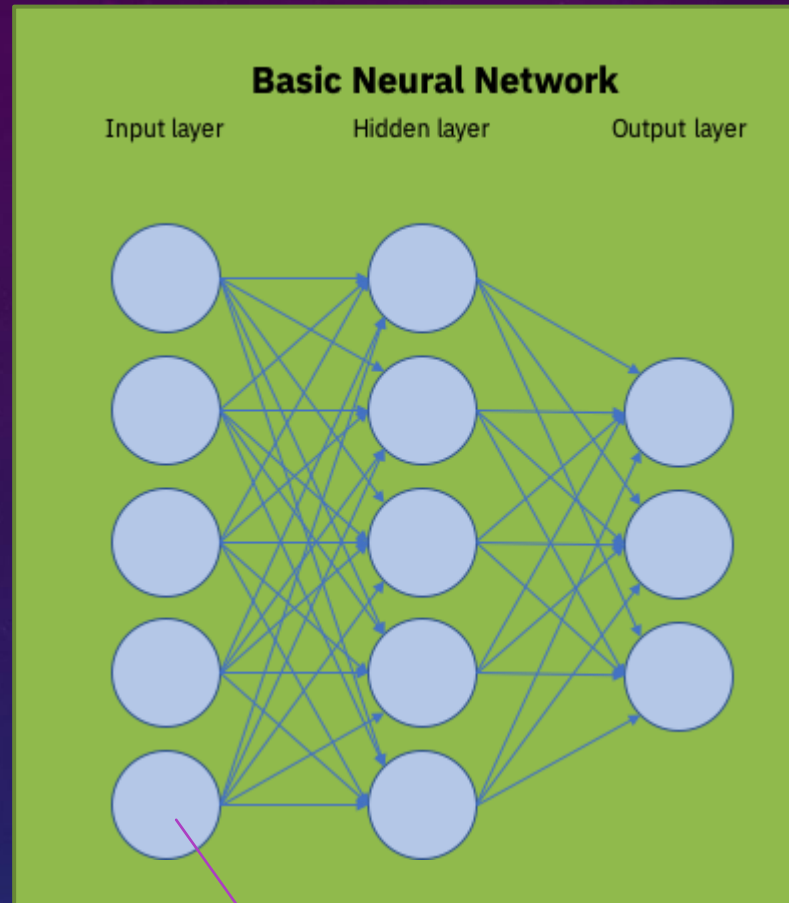
ML : Learns by itself, reprograms based on data, human required.



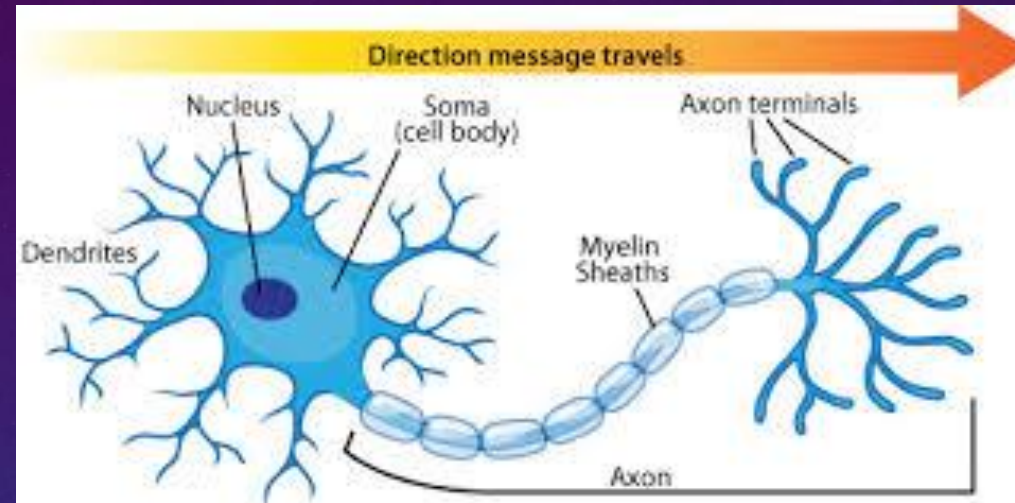
Deep Learning : No Human intervention, subset of ML



Neural Networks: Mimics a brain neuron



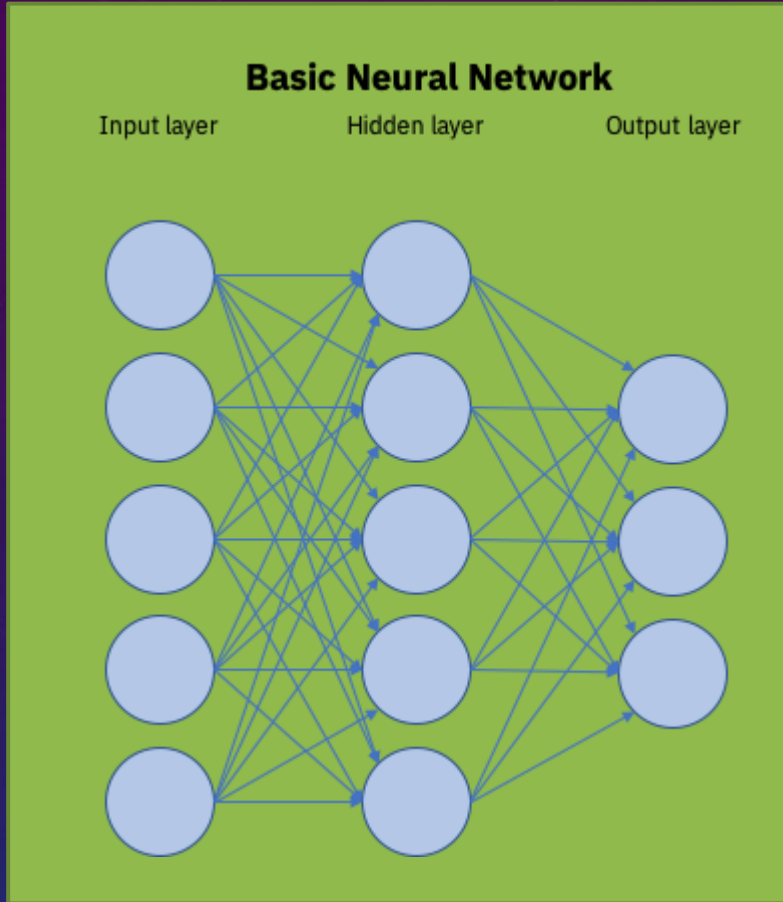
Node



1. Input Layer
2. Hidden Layer (at least 1)
3. Output Layer

ML Vs Deep Learning : Based on data

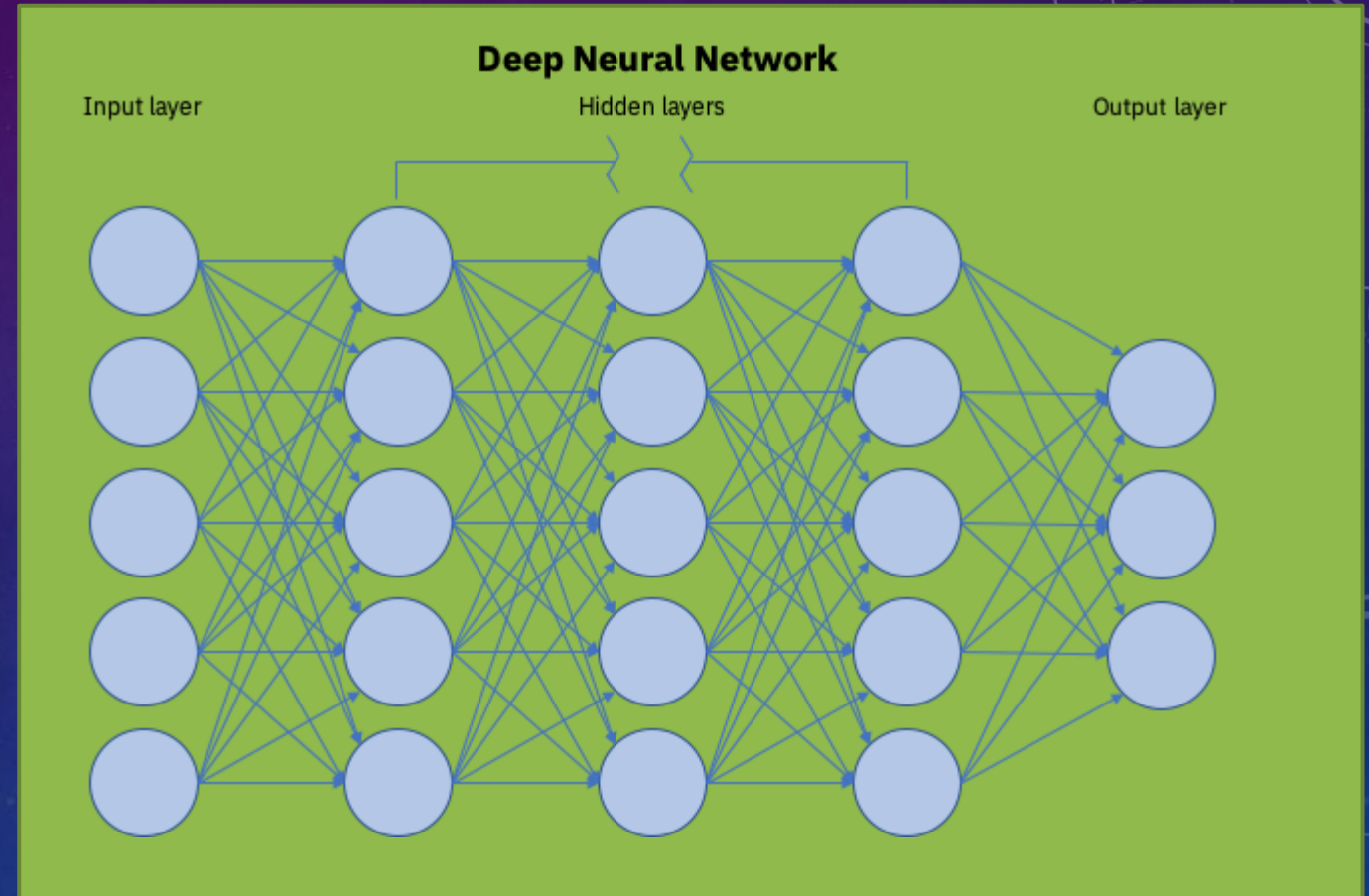
ML : Single layer neural network
(one hidden layer)



ML : 1) Process structured data, labelled data
2) Supervised learning - human intervention required

Deep Learning : Multiple hidden layers

Forward propagation



Backward propagation

Deep Learning : 1) Process un structured data
2) Unsupervised learning - no human intervention required

The AI Ladder

A prescriptive, proven approach to accelerating the journey to AI



AI

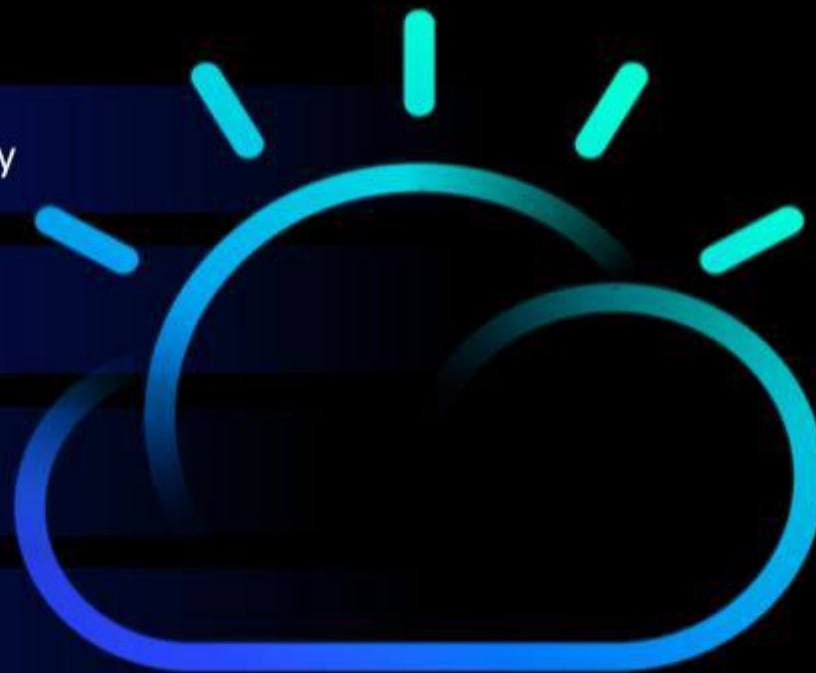
INFUSE – Operationalize AI with trust and transparency

ANALYZE - Scale insights with AI everywhere

ORGANIZE - Create a trusted analytics foundation

COLLECT - Make data simple and accessible

Data of every type,
regardless of where it lives



MODERNIZE
your data estate for an
AI and multicloud world

References :

1. <https://www.ibm.com/cloud/learn/what-is-artificial-intelligence>
2. <https://www.ibm.com/cloud/blog/ai-vs-machine-learning-vs-deep-learning-vs-neural-networks>

