



**UNIVERSITÀ
DEGLI STUDI
DI TRIESTE**

MODULO 3: Introduzione al machine learning

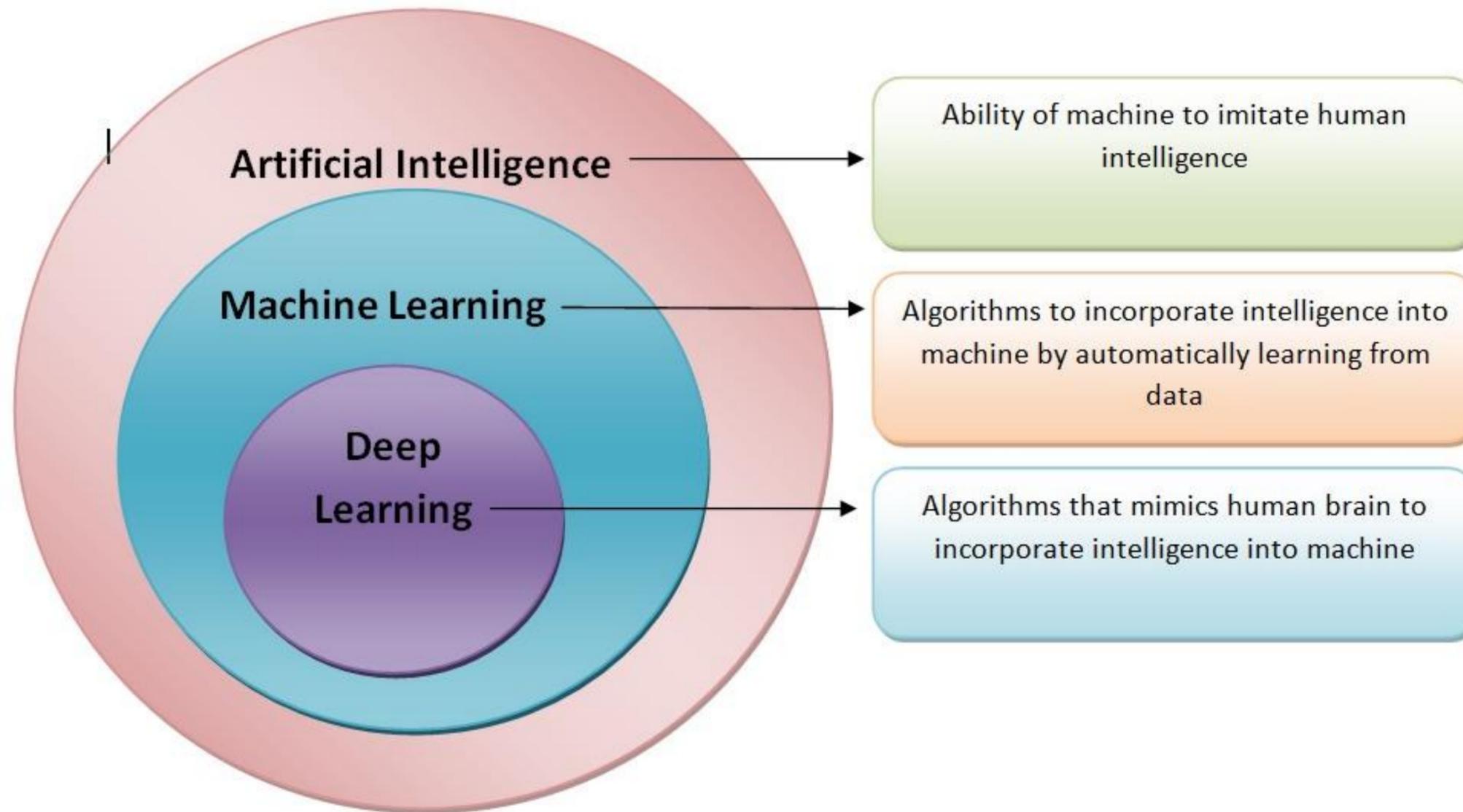
Prof.ssa Giulia Cisotto

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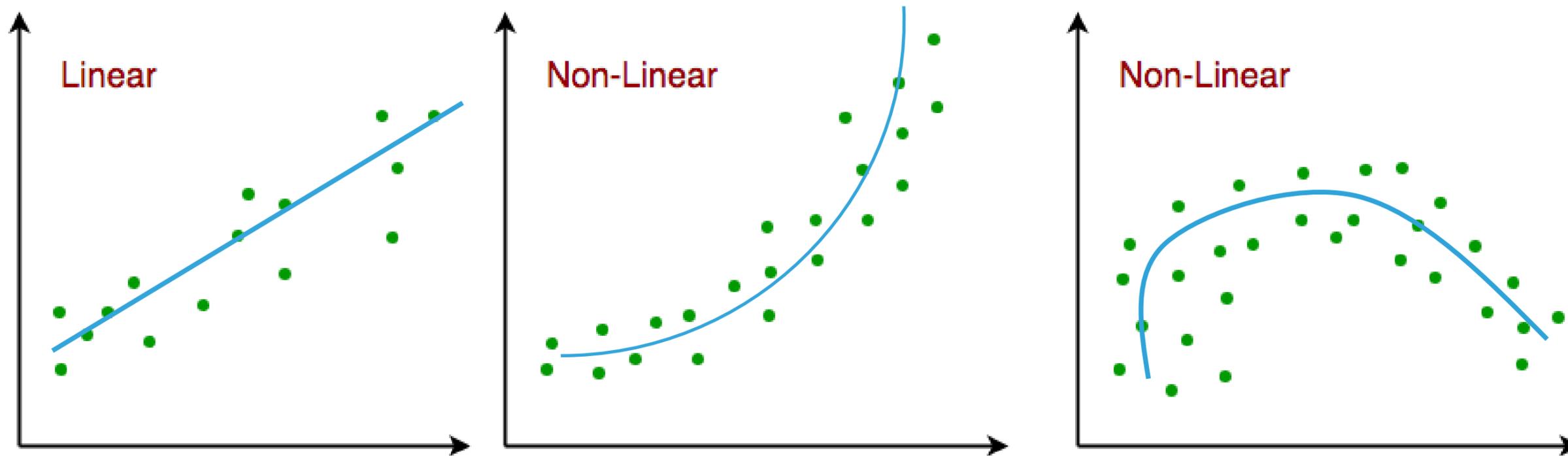
Trieste, 28 maggio 2025

COS'È IL MACHINE LEARNING?

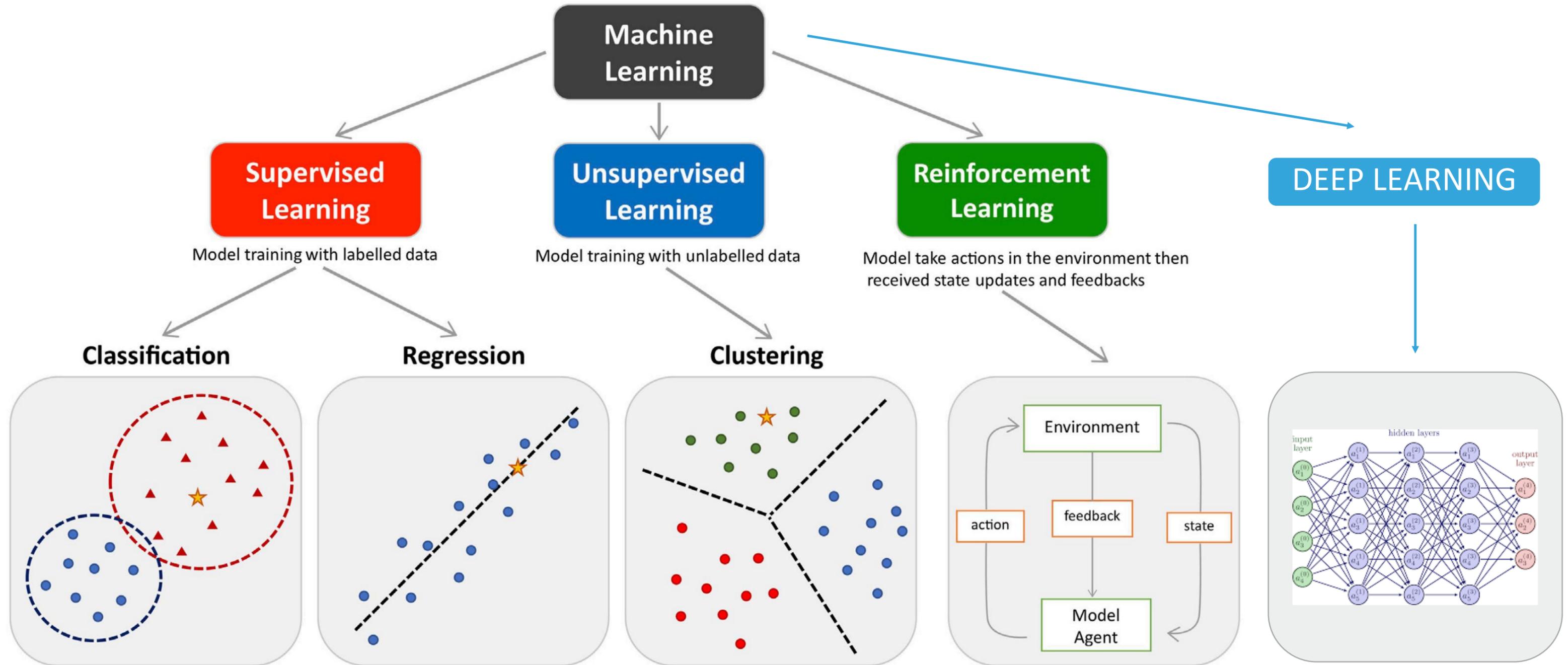
Il **machine learning (ML)** è un termine generico che indica l'**insieme di tecniche** utilizzate *per risolvere problemi per i quali lo sviluppo di algoritmi da parte di programmatori umani sarebbe troppo costoso*. Invece, questi problemi vengono risolti aiutando le macchine a “scoprire” i propri algoritmi, *senza che sia necessario dire loro esplicitamente cosa fare attraverso algoritmi sviluppati da esseri umani*.



MODELLO SUI DATI

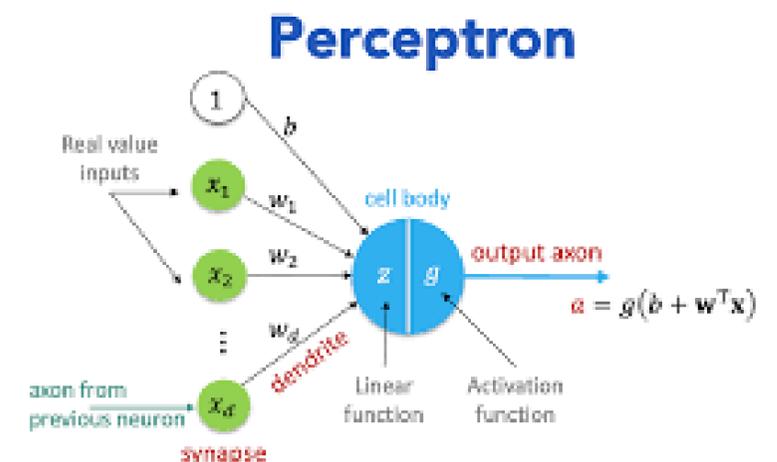
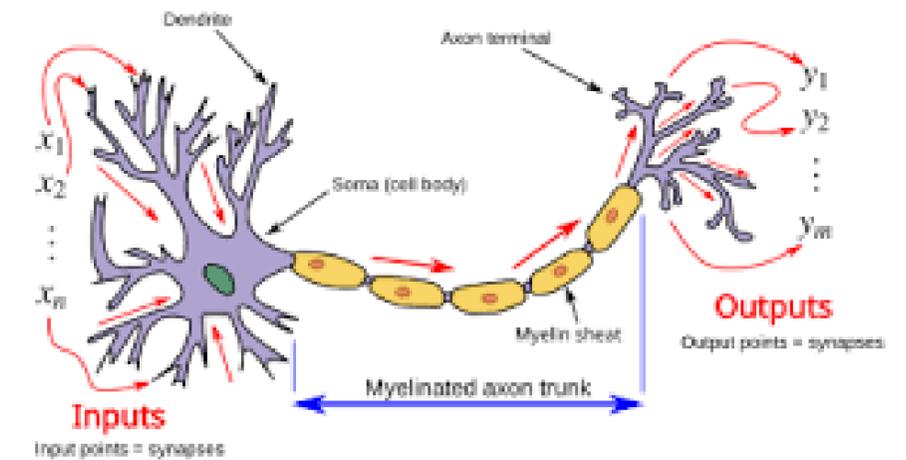
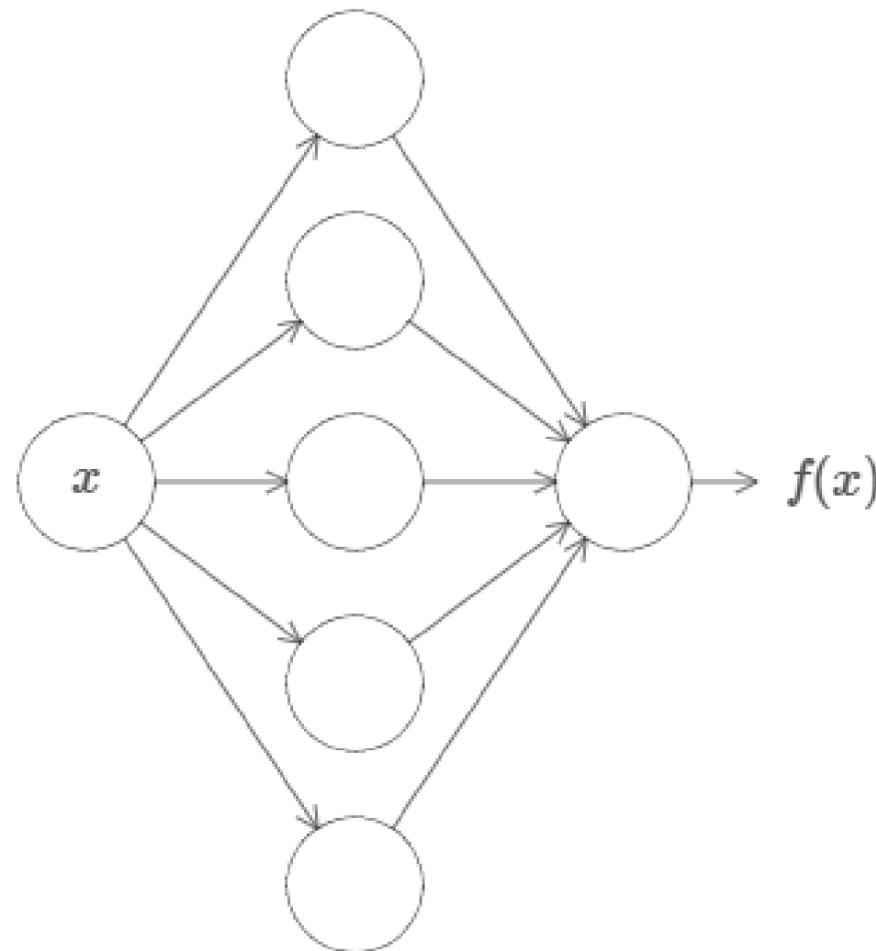
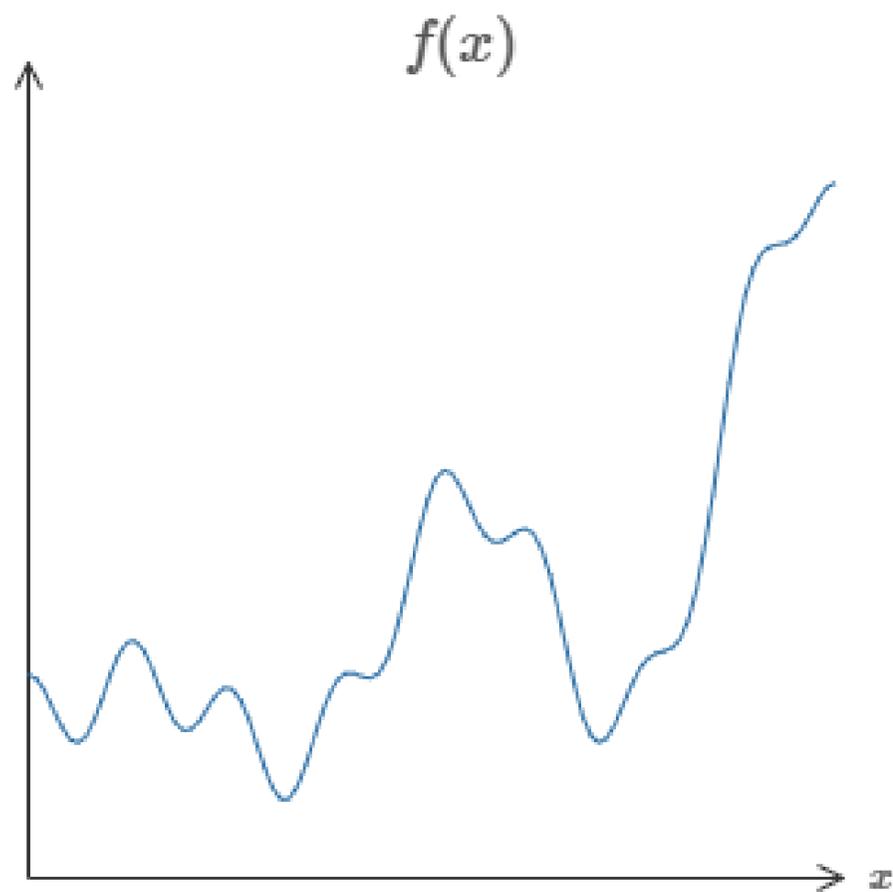


MACHINE LEARNING?



TEOREMA DELL'APPROSSIMAZIONE UNIVERSALE

No matter what the function, there is guaranteed to be a neural network so that for every possible input x , the value $f(x)$ (or some close approximation) is output from the network.

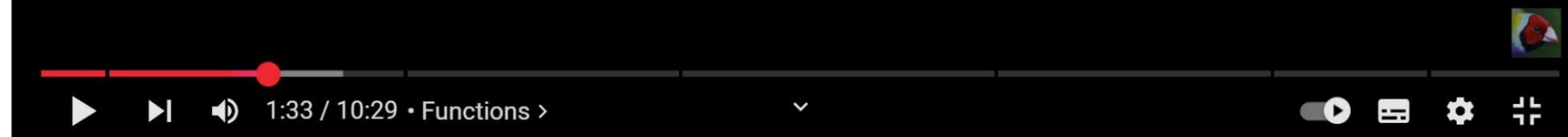


UNIVERSAL APPROXIMATION THEOREM

Why Neural Networks can learn (almost) anything

$$f(x) \approx T(x)$$

1:33 / 10:29 • Functions >



[Una chicca.. \(in inglese\)](#)



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Prossimo laboratorio: 29 maggio, h.9:00, aula 4C