



SNS COLLEGE OF TECHNOLOGY

Coimbatore - 35



23BAT615 – Artificial Intelligence for Managers

Unit III – Unboxing AI & Its Applications



Presented by

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Design Thinker

Redesigning Common Mind & Business Towards Excellence

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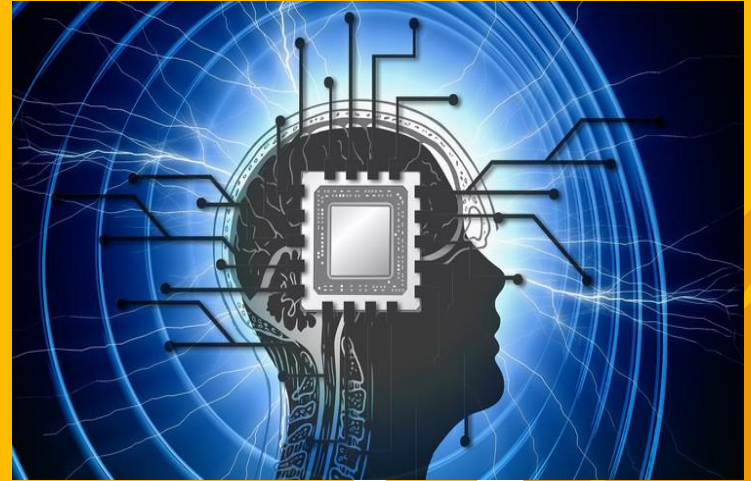
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Build an Entrepreneurial Mindset through our Design Thinking FrameWork



Recap

- Reason to study KNN
- KNN Algorithm
- KNN Algorithm Steps
- KNN Application
- KNN in ML





Discussion about....

Reason to study Neural Network

- Neural Network Types
- Application of Neural Network in Business and Finance
- Application of Neural Network

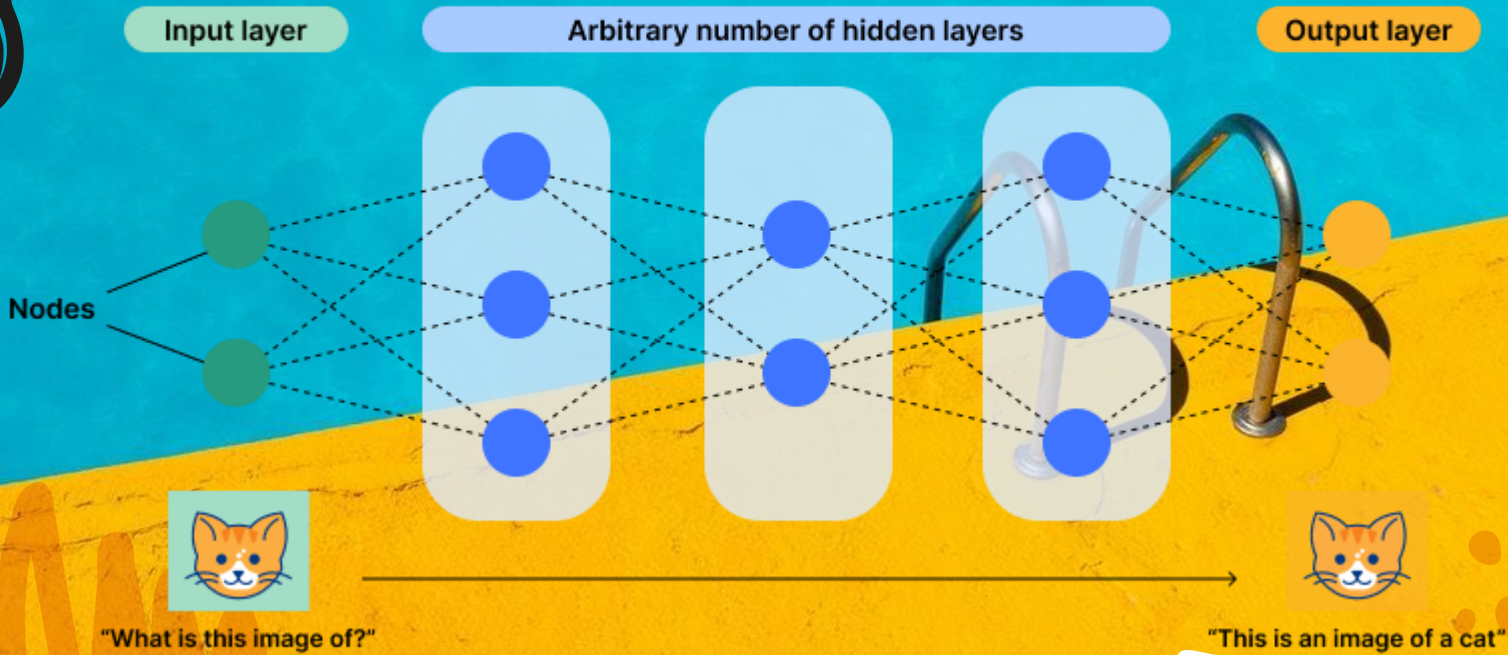




Reason to study Neural Network



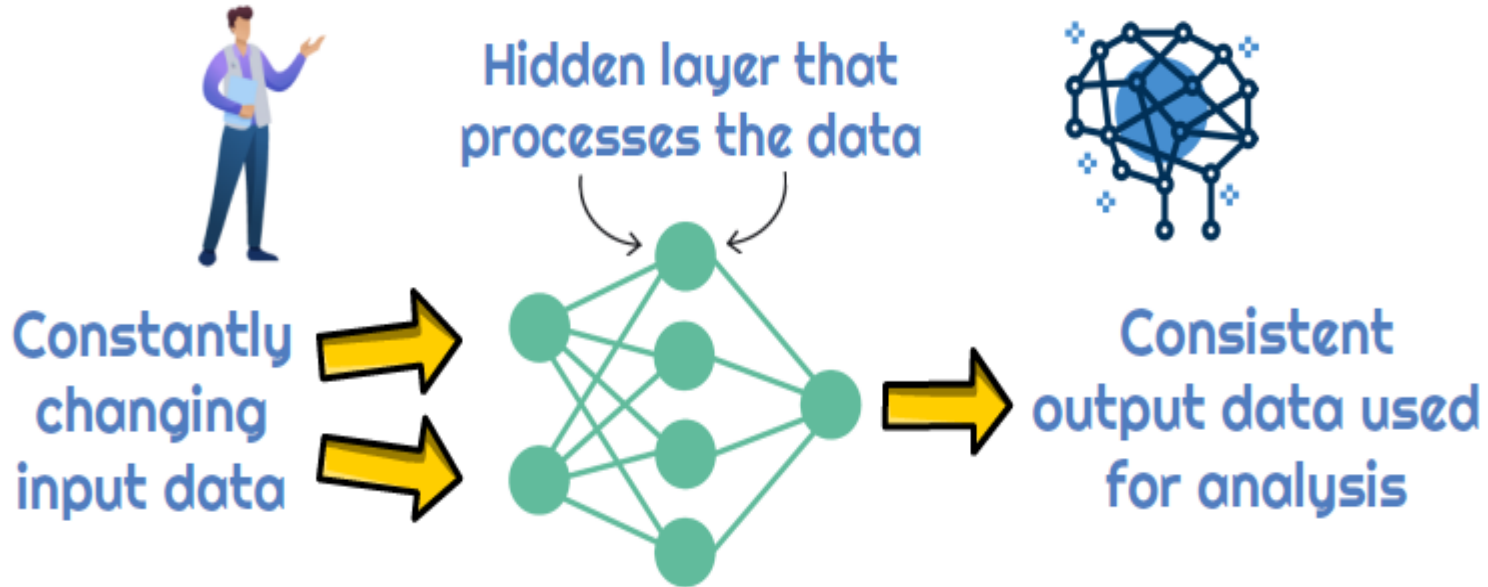
Neural network





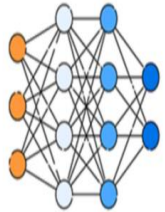
Neural Network

Similar to humans in that a neural network constantly adjusts based on changing inputs or situations.



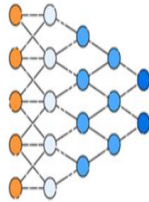


Neural Network Types



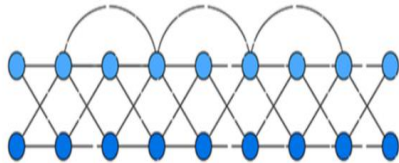
Feed Forward

Each neuron is connected to every neuron on the previous layer



Convolutional

Each neuron is connected only to the neurons in its neighborhood from the previous layer



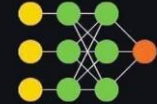
Residual Network

There are connections between networks that do not belong to neighboring layers

TYPES OF NEURAL NETWORKS



Deep-Feed Forward (DFF)



Support Vector Machine (SVM)



Boltzmann Machine (BM)



Deep Convolutional Network (DCN)



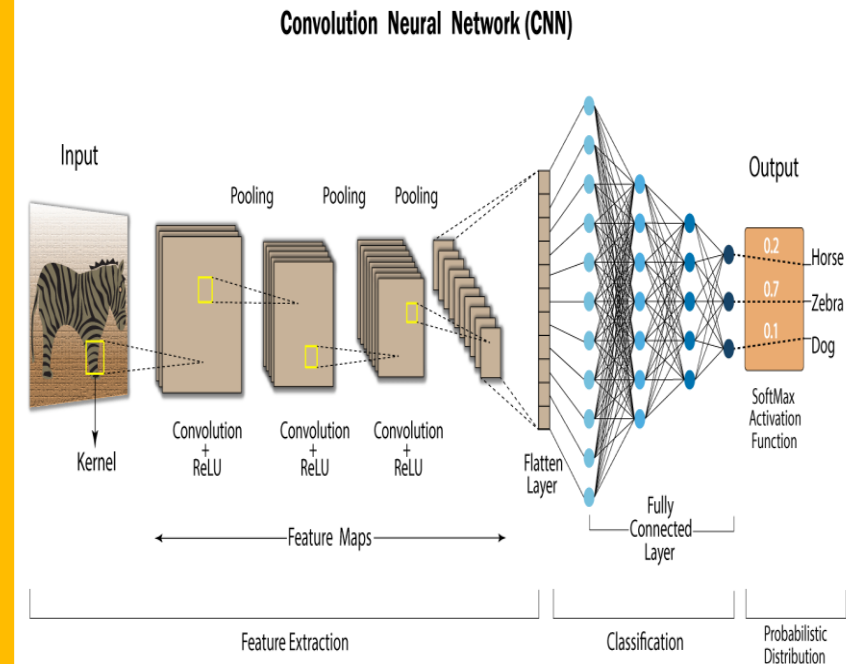
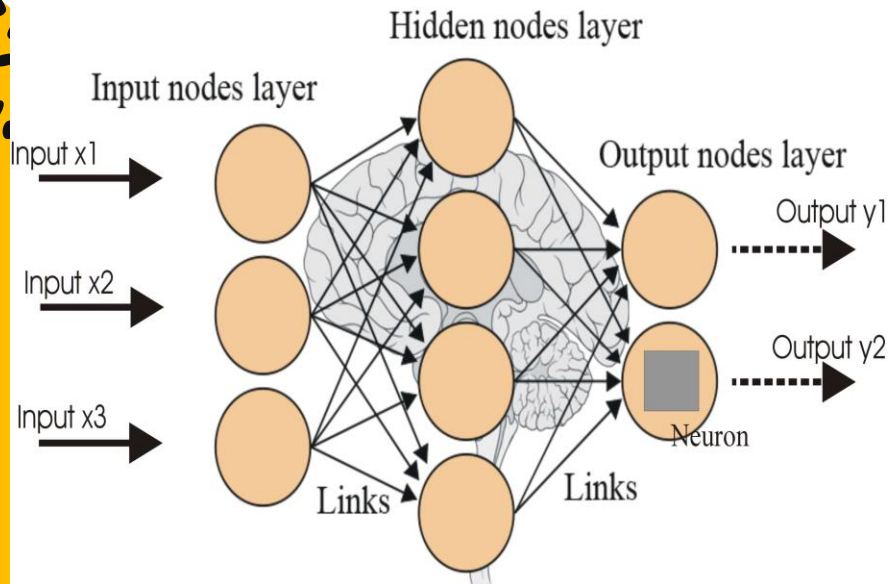
Deconvolutional Network (DN)



Neural Turing Machine (NTM)

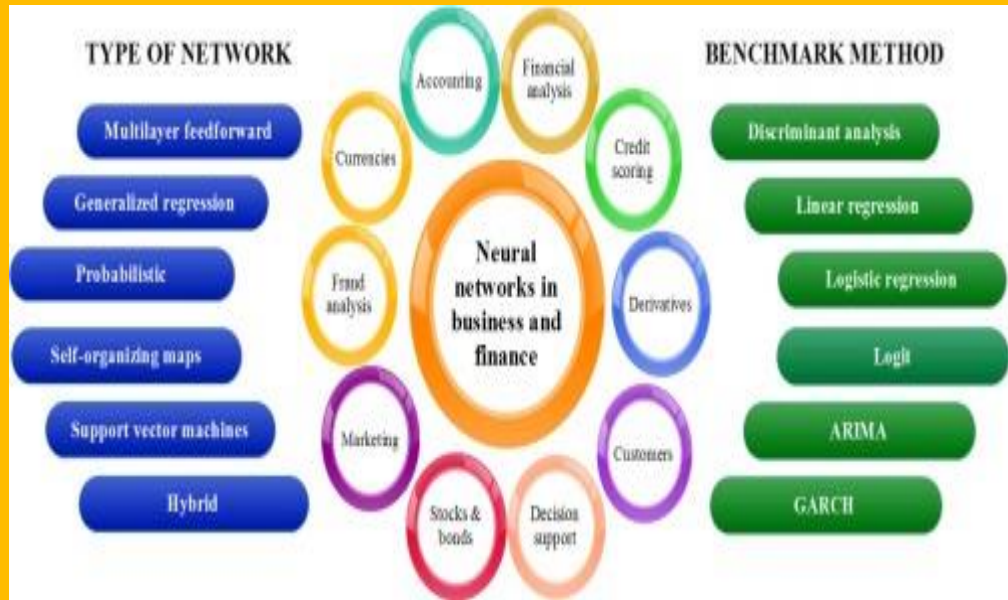


Neural Network









Application of Neural Network in Business and Finance



Application of Neural Network

Industry	Business Applications
 Electronics	Code sequence prediction, integrated circuit chip layout, process control, chip failure analysis, machine vision.
 Speech	Speech recognition, speech compression, vowel classification, and text-to-speech synthesis
 Securities	Market analysis, automatic bond rating, and stock trading advisory systems
 Banking	Check and other document reading and credit application evaluation



Knowledge Check

A retail company is using a neural network to predict sales based on various factors such as marketing spend, seasonality, and economic indicators. Which of the following is a primary advantage of using neural networks for this prediction task?

- X A) Neural networks require less data compared to traditional regression methods.
- X B) Neural networks can automatically detect and learn complex non-linear relationships in the data.
- X C) Neural networks always provide interpretable models that are easy to understand.
- X D) Training neural networks is always faster than training other machine learning models.
- X **Answer: B) Neural networks can automatically detect and learn complex non-linear relationships in the data.**



Summary

- Reason to study Neural Network
 - Neural Network Types
 - Application of Neural Network in Business and Finance
 - Application of Neural Network



WMA



References

➤ <https://www.investopedia.com/terms/n/neuralnetwork.asp#:~:text=Application%20of%20Neural%20Networks&text=Specific%20to%20finance%2C%20neural%20networks,volatility%20expectations%20for%20certain%20investments.>



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Thanks!

