



# SNS COLLEGE OF TECHNOLOGY

Coimbatore - 35



## 23BAT613 – Artificial Intelligence for Managers

### Unit II – Unboxing ML & Its Applications



Presented by

**Ms.S.D.Shamini**

*Design Thinker*

Redesigning Common Mind & Business Towards Excellence

**1<sup>st</sup>** Indian  
Institution  
to Implement  
& Patent  
Design  
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FrameWork

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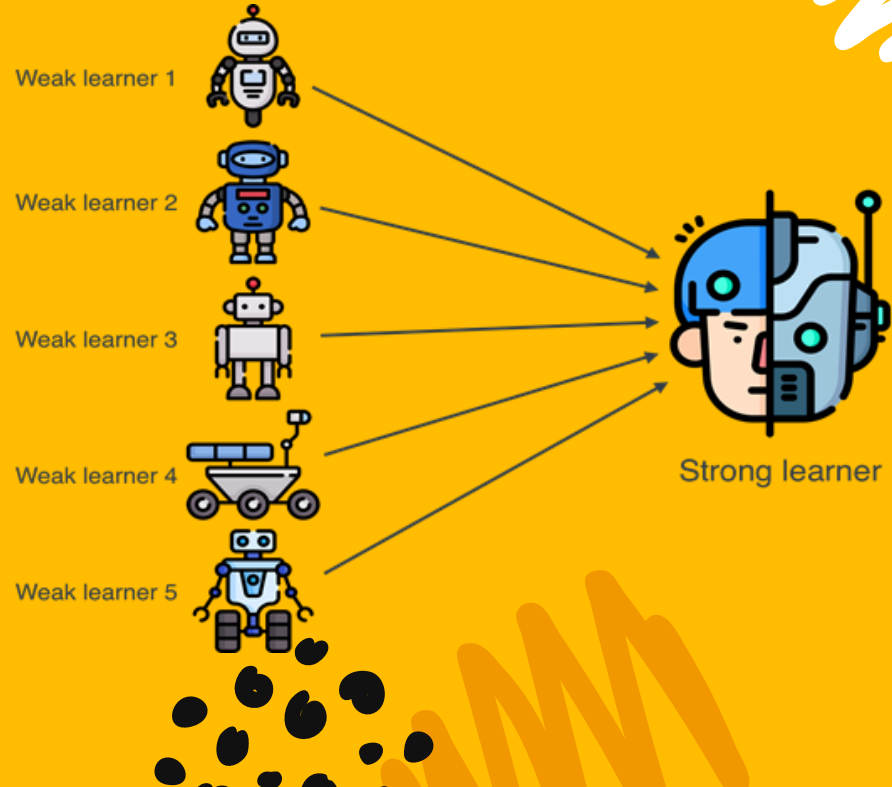
Build an Entrepreneurial Mindset through our Design Thinking FrameWork



# Guess the Topic!!!



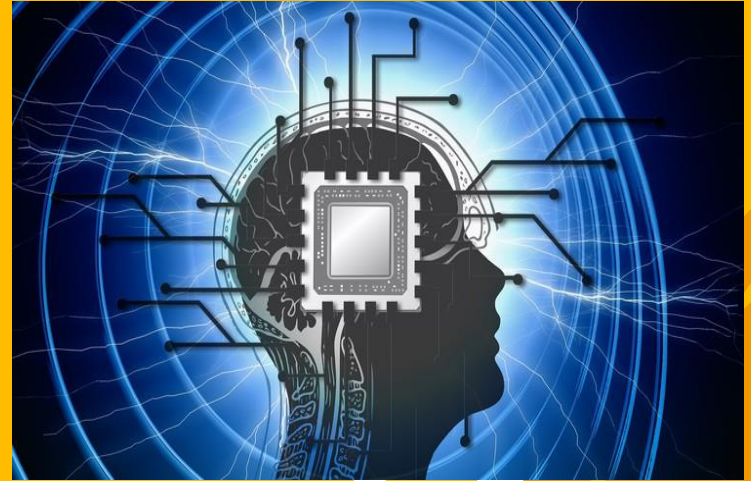
## Ensemble Technique





# Recap

- Reason to study unsupervised Learning
- Unsupervised Learning - types
- Unsupervised Learning -Clustering
- Unsupervised Learning – Dimensionality Reduction
- Unsupervised Learning – Association Rule
- Supervised Learning vs Unsupervised Learning





# Discussion about....

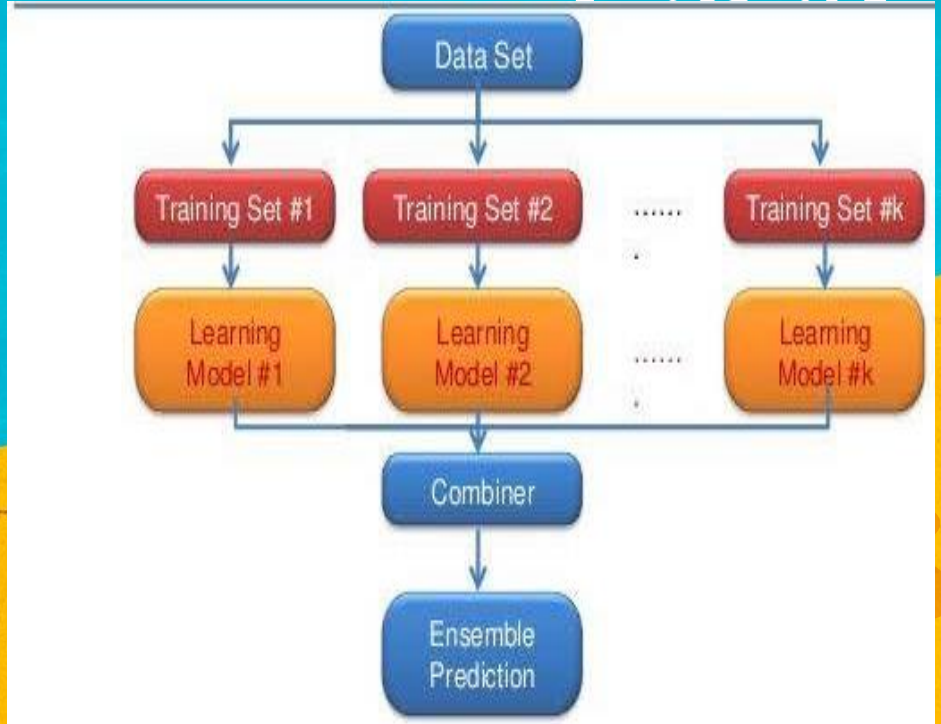
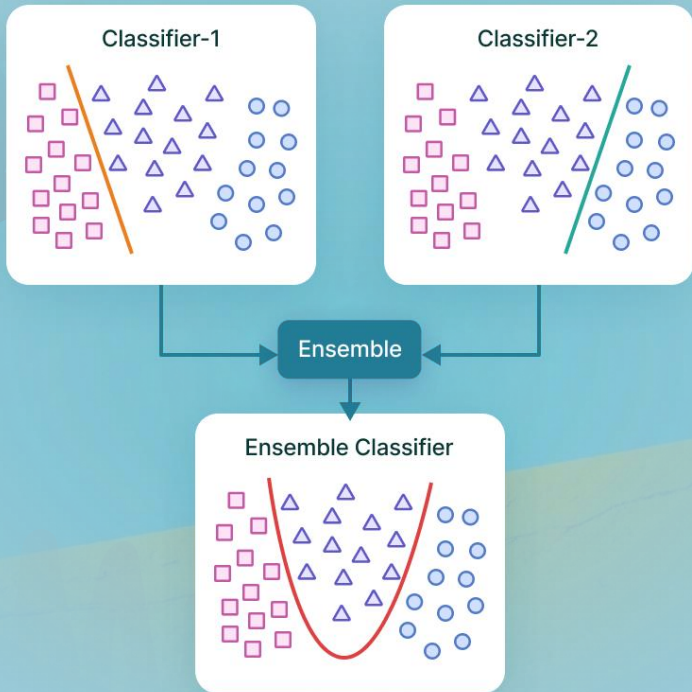
Reason to study Ensemble Technique

- Ensemble Technique
- Ensemble Technique – types
- Bootstrap Algorithm
- Boosting Algorithm
- Stacking Algorithm





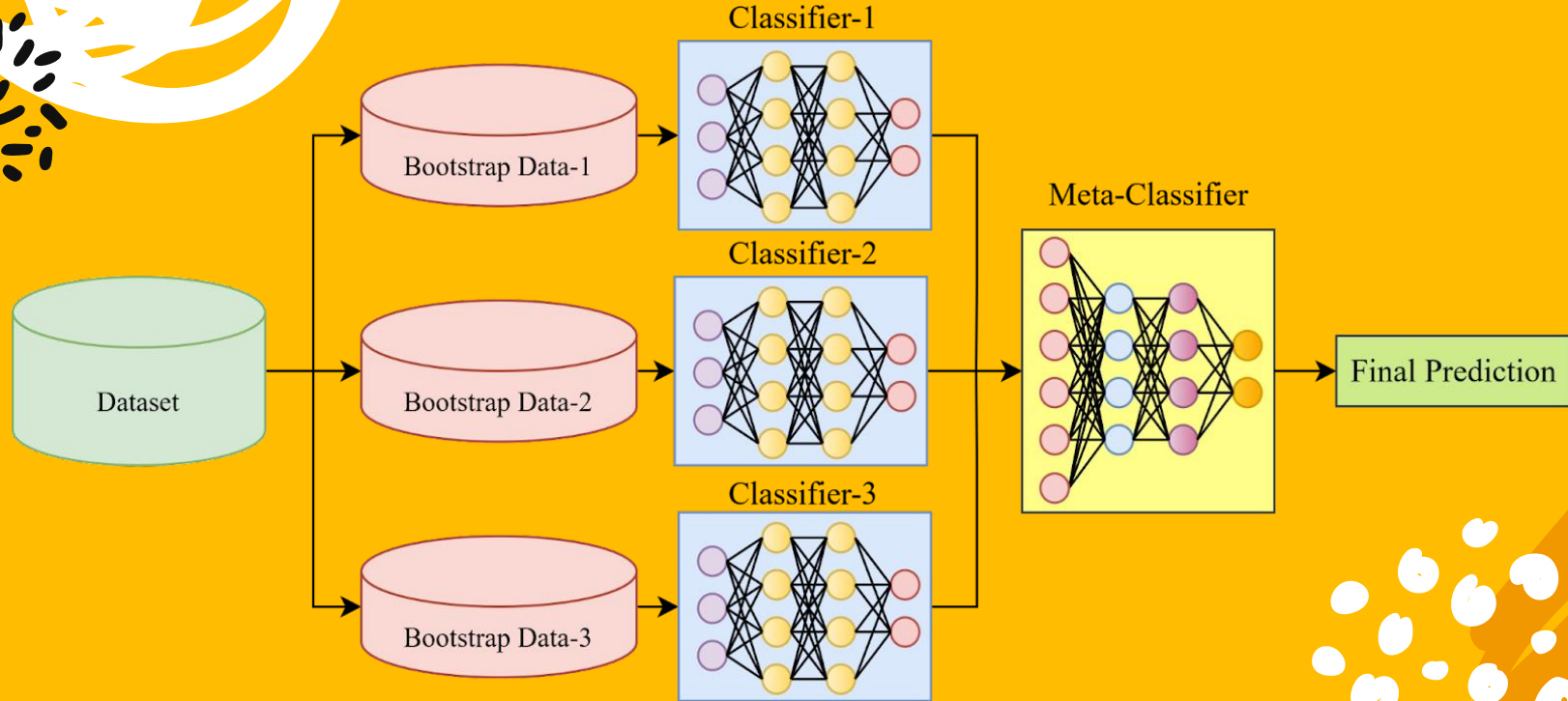
# Reason to study Ensemble Technique







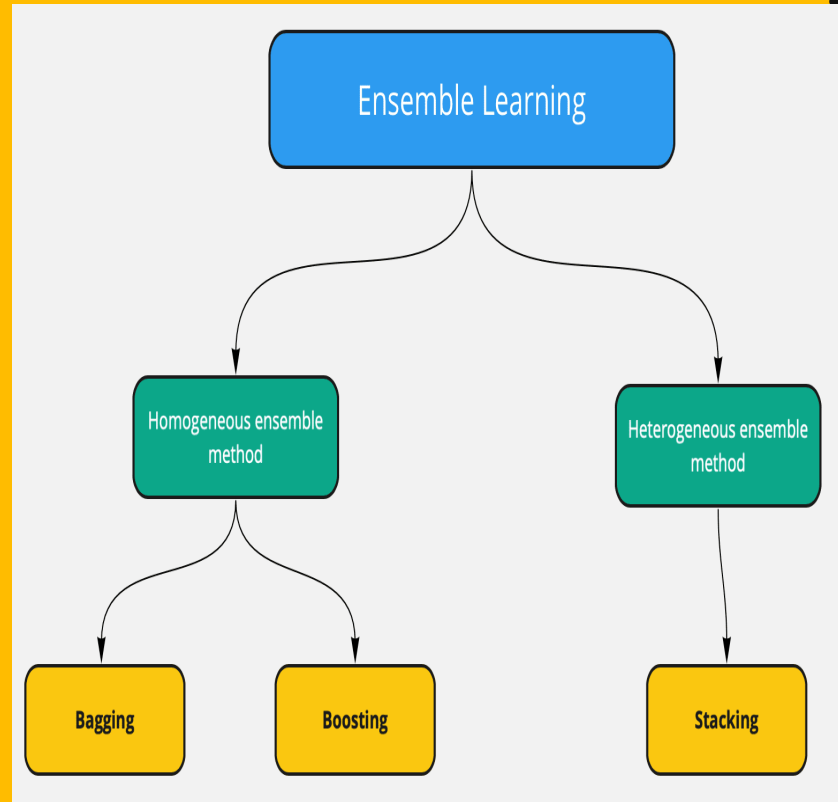
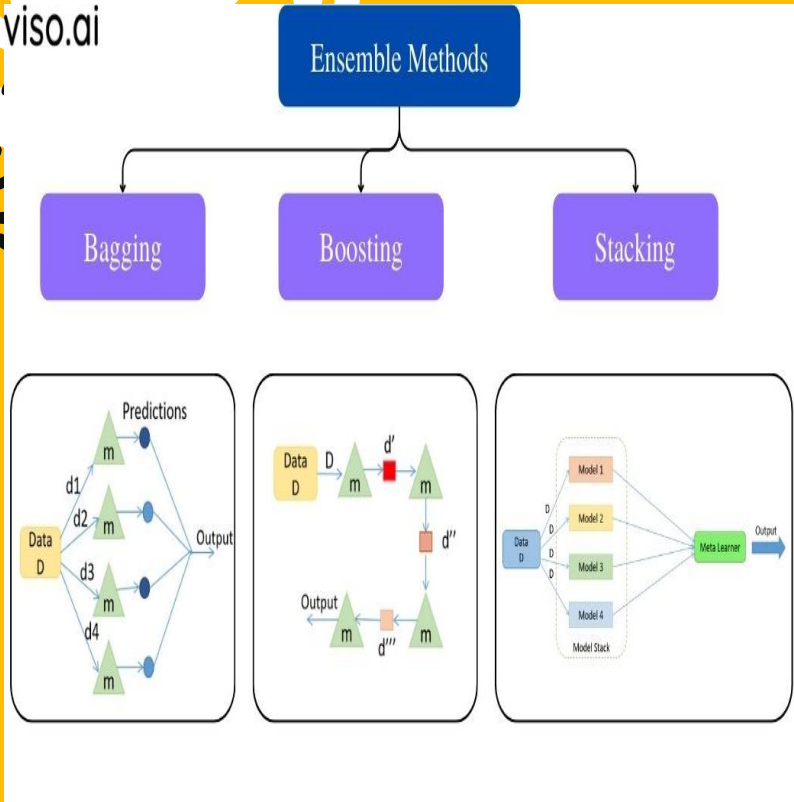
# Ensemble Technique





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# Ensemble Technique - Types

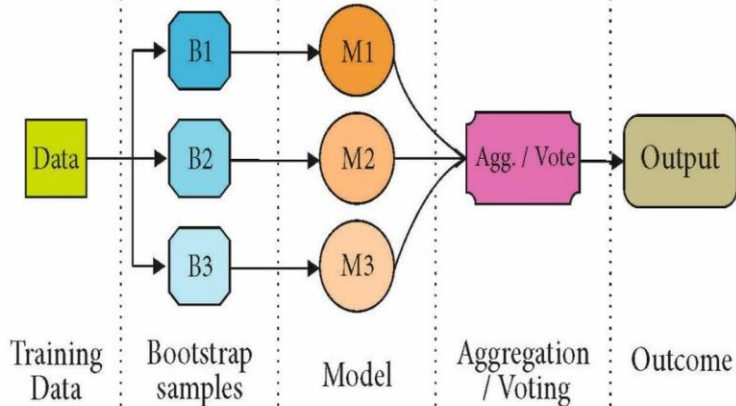




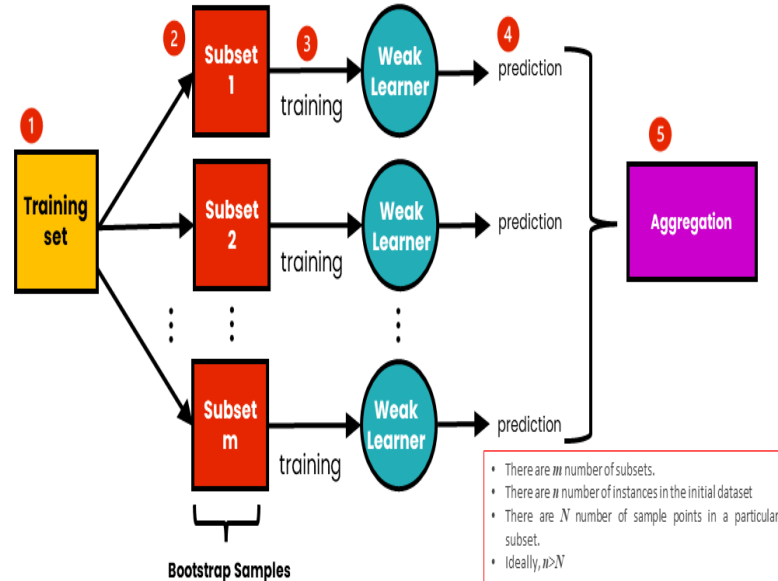
# Bagging Algorithm

## BAGGING Algorithm

*Bootstrap Aggrigating*



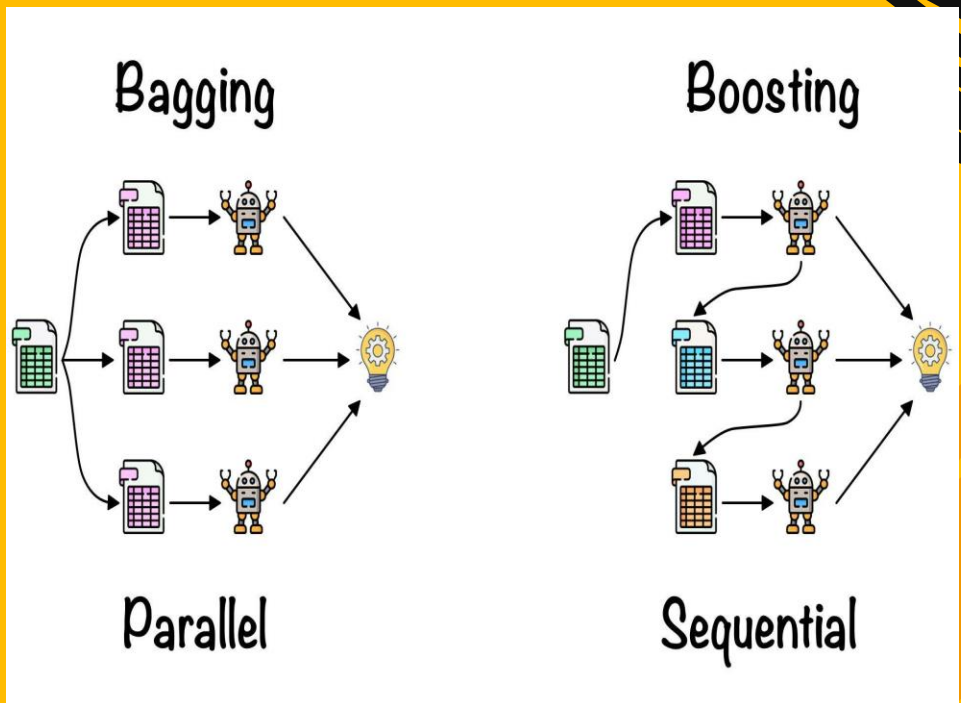
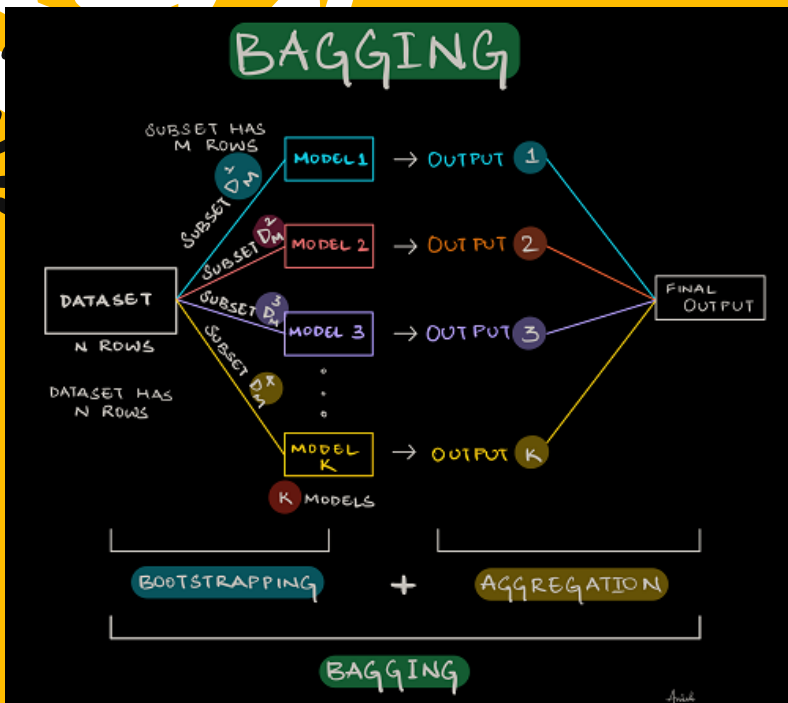
## The Process of Bagging (Bootstrap Aggregation)







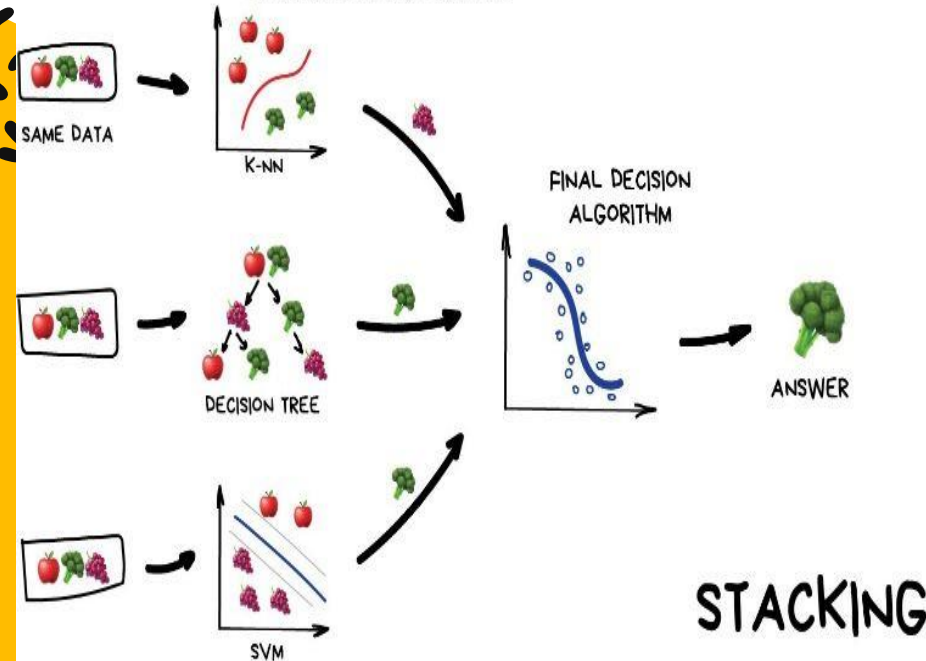
# Bagging Algorithm



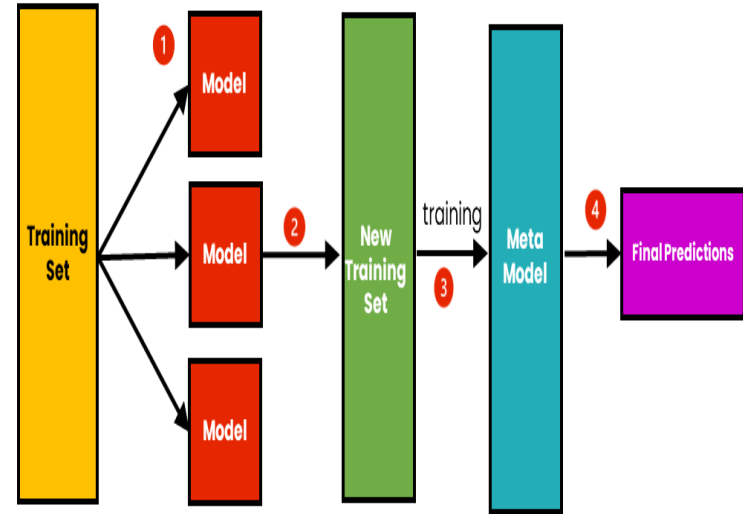


# Stacking

## DIFFERENT ALGORITHMS



## The Process of Stacking





# Knowledge Check

Which ensemble technique aims to combine multiple weak learners sequentially, with each subsequent learner correcting the errors of its predecessors?

- X a) Bagging
- b) Random Forest
- c) Boosting
- d) Stacking

X **Answer: c) Boosting**



# Summary

- Reason to study Ensemble Technique
- Ensemble Technique
  - Ensemble Technique – types
  - Bootstrap Algorithm
  - Boosting Algorithm
  - Stacking Algorithm





# References

- <https://www.geeksforgeeks.org/ensemble-classifier-data-mining/>





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# Thanks!

