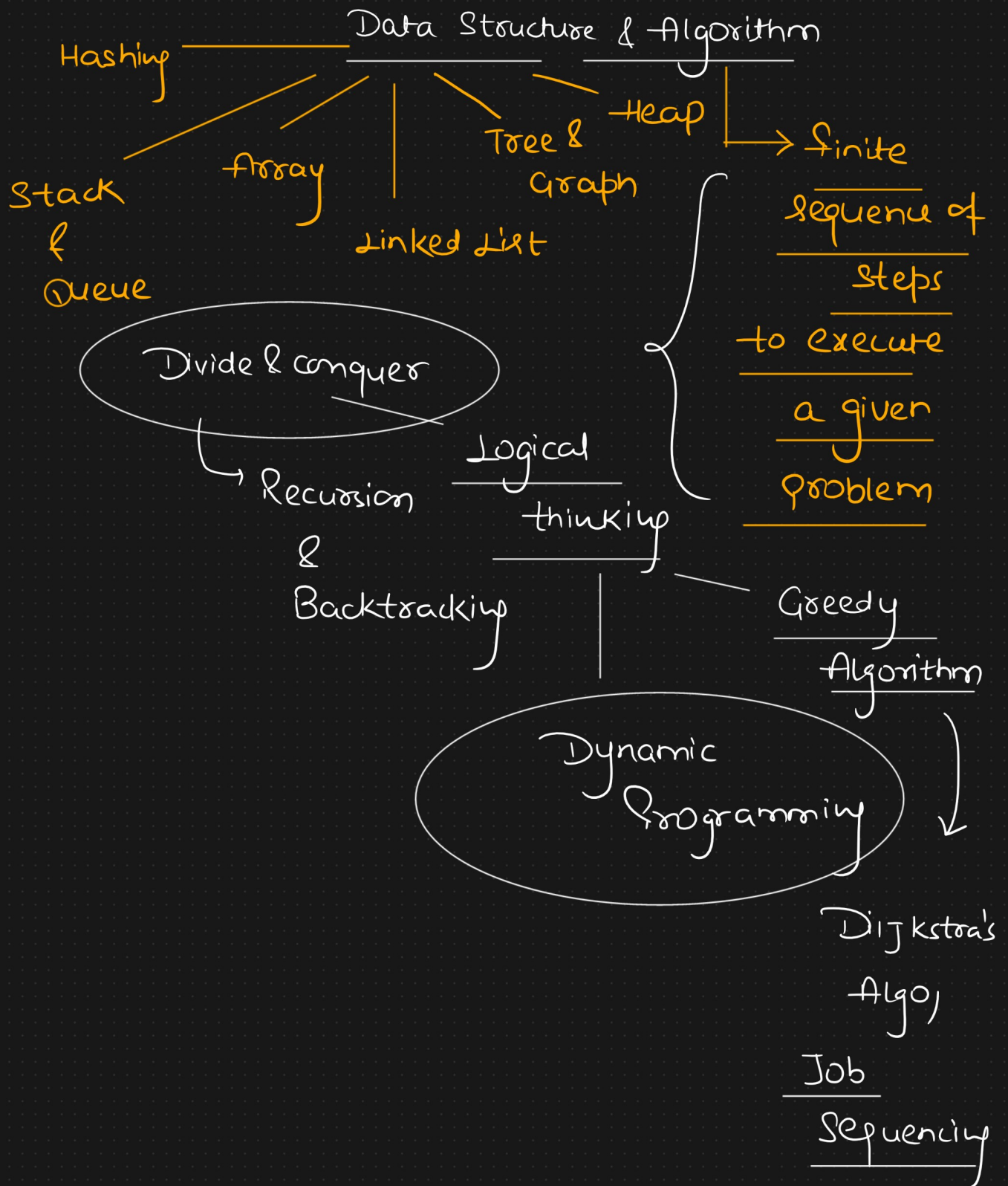


Role of DSA in Data Science



Data Science

Machine Learning
↓

Numeric

Data

Search

Binary Search

↓ sort on the basis of

Merge Sort

Quick Sort

$O(n \log n)$

Deep Learning & Computer vision

Natural Language Processing

Dataset

Image

RGB

3D Array

Pixel

Multidimensional Array

Optimized code

→ Time & Space Complexity

→ Number of Loops

→ Recursive codes

↓
Low time & space complexity

K-Nearest Neighbour

→ KD Tree

Scikit-learn

sort()

Binary Tree

K-Means clustering

(x_1, y_1)

(x_2, y_2)

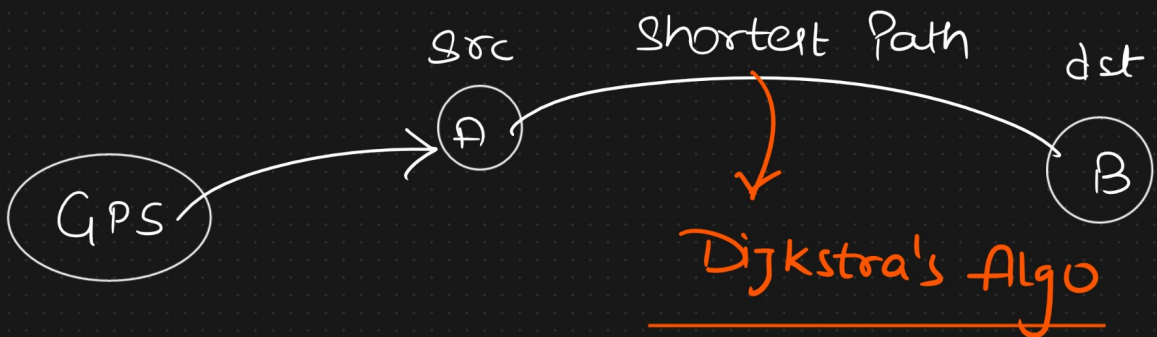
function

Euclidean distance

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

→ Minheap

Distance



Machine

Learning

Ensemble Techniques

↳ Random Forest

↳ Classification &

Regression

Tree Data

Structure

Decision Tree → Classification

&

Regression

Ginni Index / Entropy

↳ Optimisation of any code in Data Science

↳ DSA

↳ Crack any good Product based companies

- 1) 2-3 coding questions
- 2) Technical Round