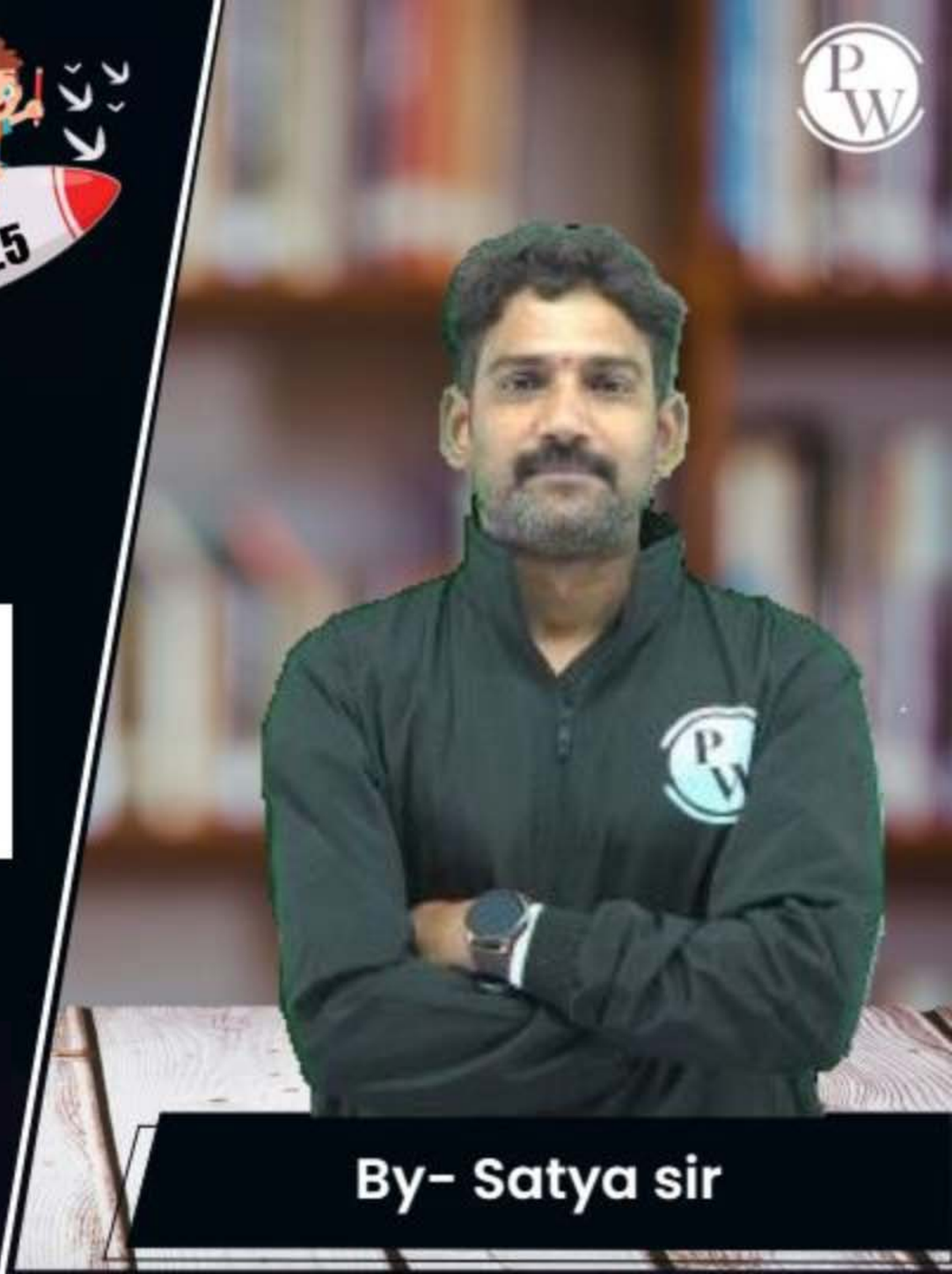
Computer Science & DA

DOUBTS SESSION

Python-For Data Science



Live / Interactive Doubt Session

Maha Revision on YT

- Python - 15/Jan/2025 - Wed - 4PM
- DS - 22/Jan/2025 - Wed - 4PM

Maha Abhyaas on YT

- Python - 16/Jan/2025 - Thu - 7PM
- DS - 23/Jan/2025 - Thu - 7PM

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GATE 2025 Exam

Expected Weightage :

Python – 5 Marks +

DS through Python – 6 Marks +

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Important Topics

Python Programming

- Operators
- Control statements (Loops)
- Collection Types*** (String, list, Set, Tuple, Dictionaries)
- functions / Recursion**
- Miscellenous Topics (List Comprehension, Dictionary Comprehension, Lambda Function, Inheritance, Access specifiers, Exception handling)

Modules in Python

- numpy
- Collections
- DateTime
- math

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Data Structures

1. Stack applications [Expression Conversion, Expression Evaluation]
2. Stack operations, Permutations
3. Queues Using Stack, LL – Time Complexity
4. LL – Programming
5. ** Trees
6. Collission Resolution Techniques

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Sorting Algorithms

	Best	Average	Worst case
Selection Sort	$O(n^2)$	$O(n^2)$	$O(n^2)$
Merge Sort	$O(n\log n)$	$O(n\log n)$	$O(n\log n)$
Heap Sort	$O(n\log n)$	$O(n\log n)$	$O(n\log n)$
Insertion Sort	$O(n)$	$O(n^2)$	$O(n^2)$
Bubble Sort	$O(n)$	$O(n^2)$	$O(n^2)$
Quick Sort	$O(n\log n)$	$O(n\log n)$	$O(n^2)$

Algorithms

1) Asymptotic Notations
2) Recurrence Relations
3) Sorting Algorithms
4) Shortest Path algorithms & MST algo (Graphs)

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Suggested Order of Practice [Revision Through Practice]

DA:

1. DPP, WT Solving
2. CS Ds PYQ
3. TWT, SWT, MST

} Analyze Results and Work on Improvement Areas

4. GBG
5. Maha Revision, Maha Abhyaas
6. Super 1500, class Questions

CS: 1. Last 15 years (minimum) PYQ

2. DPP, WT
3. TWT, SWT, MST
4. Workbook Q's
5. Super 1500 Q's
6. GBG
7. Maha Revision, Maha ABYaas

THANK - YOU