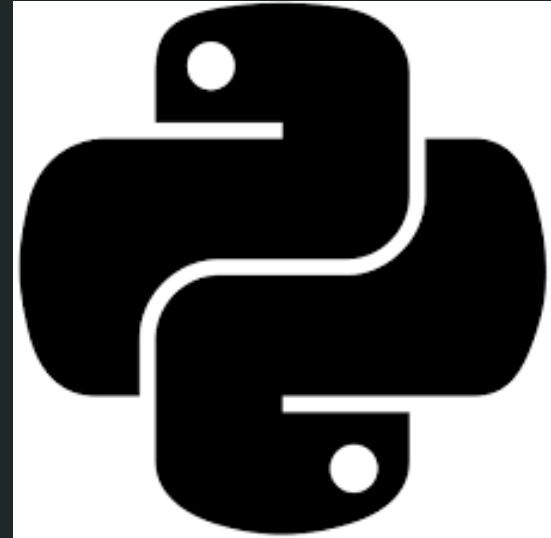# Your Learning Strategy
Python Data Engineering Course

Topics at a Glance

- ❖ Python Complete
- ❖ File Formats
- ❖ Batch Processing | ETL
- ❖ SQL
- ❖ Airflow | Docker
- ❖ PySpark
- ❖ AWS
- ❖ LINUX
- ❖ Data Architects
- ❖ Kafka

Life of a Programmer as Data Engineer

- ❖ Introduction to Computer Science

- ❖ Introduction to Data Engineering

- ❖ Types of Data Engineering
- ❖ Whatever you will learn how it is used in real world codebase (show you industry code)

What is Data Engineering and Coding

- ❖ How Data Engineering Code
- ❖ How software world working
- ❖ What is Coding
- ❖ What is Data Structures (DSA) and its use in Data Engineering
- ❖ What is open-source software / Proprietary software

Building Logic and Computational Thinking in DE

- ❖ Data Engineering on Cloud

- ❖ Role of Programming Language in Data Engineering

- ❖ How to thinking in right direction as Data Engineering

- ❖ How to break the problem of ETL

- ❖ How to use all tools in Data Engineering, to solve a data challenge

Input / Output in Python

❖ Various Ways to take input in Python

      - Strings   - tuple

      - List   - set

      - Dictionary

❖ Printing output in various ways

❖ Why taking input and printing output matters

Thinking Right and Solving Skills

Thinking Right and Solving Skills

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Thinking Right and Solving Skills

Thinking Right and Solving Skills

Data Structure - Strings

❖ How strings works

❖ Real world usage of strings

    Ex. Logger, UI, UX

❖ Iteration

❖ Indexing

❖ Manipulation

❖ All in-built functions

Thinking Right and Solve Skills

Thinking Right and Solve Skills

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Thinking Right and Solve Skills

Thinking Right and Solve Skills

Data Structures - List

- ❖ How list works
- ❖ Real world usage of list

  Ex. Storing, Matrix

- ❖ Iteration
- ❖ Indexing
- ❖ Manipulation
- ❖ All in-built functions

Thinking Right and Solve Skills

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Thinking Right and Solve Skills

Thinking Right and Solve Skills

Thinking Right and Solve Skills

Thinking Right and Solve Skills

Data Structures - Tuple

❖ How tuple works

❖ Real world usage of tuple

      Ex. Banking, Crypto

❖ Iteration

❖ Indexing

❖ Manipulation

❖ All in-built functions

Thinking Right and Solve Skills

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Time Complexity

- ❖ All Searching Algorithms
- ❖ All Sorting Algorithms

Data Structures - Dictionary | Most important in DE

- ❖ Most used Data Structures in Industry

- ❖ How Dictionary works

- ❖ Input

- ❖ Output

- ❖ Formatting

- ❖ Usage

Functions

❖ Usage

❖ Working with Functions

❖ Arguments | Positional | Keywords | *args

❖ How functions works

❖ Variable Scoping

❖ Return in functions

Object Oriented Programming

- ❖ Usage

- ❖ Working with Functions/Methods

- ❖ Attributes

Here we come to the Good Part

❖ Leetcode

Introduction to File Formats and working in DE

❖ JSON

❖ Parquet

❖ CSV

❖ SFTP

❖ FTP

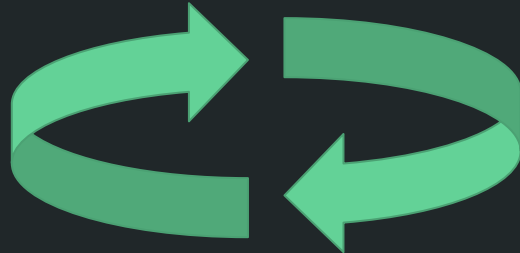# Important Tools in Data Engineering

❖ We learn Airflow Introduction and Create DAGs

❖ Batch Processing

❖ ETL Concept

❖ PySpark Data Processing

❖ Introduction to AWS Services - S3, EMR, SQS, SNS, Lambda, EC2, Athena, Glue, AWS Secret Manager, IAM

❖ Linux Commands and Docker

❖ Data Architecture: DIM, FACT, Changing Dimensions, Time Series Data

❖ Introduction to Kafka

This is not end this is beginning

Long Road to go

To be Continue . . .

Thank you