



# *DATA ENGINEERING*

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



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# *DATA ENGINEERING*



# *INTRODUCTION TO DATA ENGINEERING*



What is Data Engineering



Big Data Ecosystem



Data Engineering Lifecycle and Security



Career Opportunities and Data Engineering in Action

# *PYTHON*



BASICS



DATA  
STRUCTURES



FUNDAMENTALS  
AND OOP



WORKING WITH  
DATA



APIS, AND DATA  
COLLECTION

# *RELATIONAL DATABASES (RDBMS)*



Relational Database Concepts



Using Relational Databases



MySQL and PostgreSQL



# *SQL WITH PYTHON*

Getting Started with SQL

Introduction to Relational  
Databases and Tables

Intermediate SQL

Accessing Databases using  
Python

Advanced SQL for Data  
Engineering

# *LINUX COMMANDS AND SHELL*



Common Linux



Shell Scripting



Bash Scripting



Scheduling Jobs

# *RELATIONAL DATABASE ADMINISTRATION (DBA)*



Database  
Management



Backup and Restore  
Databases



Monitoring and  
Optimization



Troubleshooting &  
Automation

# *ETL AND DATA PIPELINES*

ETL and ELT

Data Pipelines

Data Pipelines using Airflow

Apache Kafka to build Pipelines for Streaming Data

# *DATA WAREHOUSING*

Data Warehouses

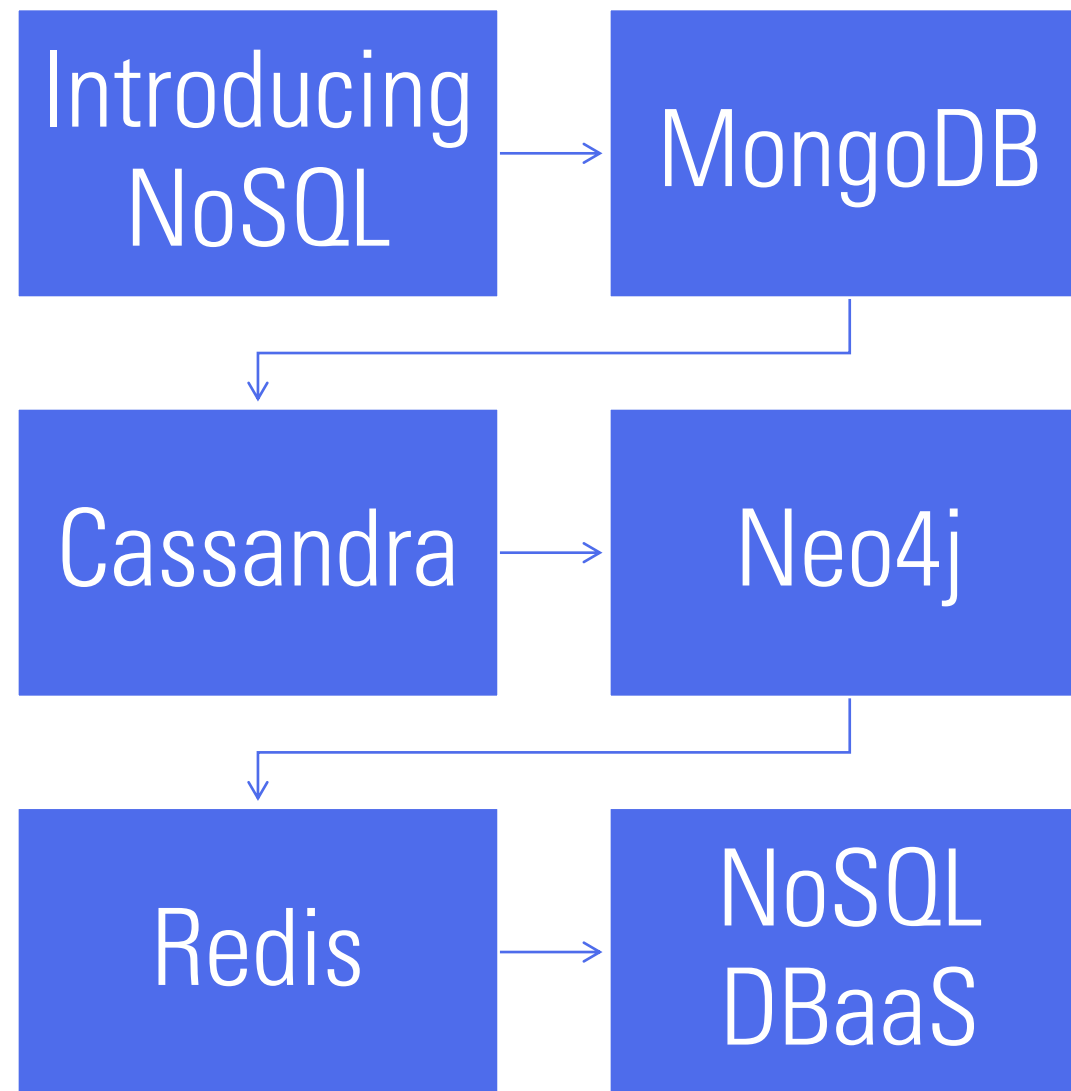
Designing, Modeling  
and Data Warehouses

Data Warehouse  
Analytics





*NOSQL*



# *SPARK AND HADOOP*

Hadoop Ecosystem



Apache Spark



DataFrames and SparkSQL



Development and Runtime  
Environment Options



Monitoring & Tuning

*SPARKML*

Spark for  
Data  
Engineering



SparkML

# *PRACTICE*



Problems Solving



Projects



Articles

# *REFERENCES*

IBM

Huawei

Medium

Towards Data  
Science

Data-flair

Documentations



*READY!!*



Work Smart



Have fun



Make History

# *ASK ME ANY QUESTIONS*

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