# **End To End Azure Data Engineer Video Tutorial**

- 1. Python
- 2. Databricks
- 3. Spark
- 4. Pyspark
- 5. Spark SQL
- 6. Delta Lake
- 7. Azure Data Factory
- 8. Azure Synapse DW (Dedicated SQL POOL)



Python Tutorial 1 : Introduction To Python

https://www.youtube.com/watch?v=jtvo6jR4rMQ

Python Tutorial 2: Introduction To Python Variables, String format function

https://www.youtube.com/watch?v=yl3uoL050gw

Python Tutorial 3 : Python Data types

https://www.youtube.com/watch?v=iorae42\_LNU

Yeython Tutorial 4: Python If conditions and For loops, while loops

https://www.youtube.com/watch?v=Y3t-UZ9wOH8

▼ Python Tutorial 5 : Python Functions and Lambda function

https://www.youtube.com/watch?v=tnXP9sNvwjU

V Python Tutorial 6: Python List and Tuple, Python Collections, Python Data structures

https://www.youtube.com/watch?v=Pze5xxQMJCc

Python Tutorial 7 : Python sets and Dictionary

https://www.youtube.com/watch?v=Phteapl02IQ

Python Tutorial 8 : Exception Handling https://www.youtube.com/watch?v=uQNamWDLc8c

Python Tutorial 9 : Python File I/O , how to create and read file in Python <a href="https://www.youtube.com/watch?v=qHJjwNdLhio">https://www.youtube.com/watch?v=qHJjwNdLhio</a>

Python Tutorial 10: Python Common Functions and list comprehensions https://www.youtube.com/watch?v=7951aTuXWEk

Python Tutorial 11: Python Regular Expressions https://www.youtube.com/watch?v=Qbrbh6o5cfw



Databricks Tutorial 1: Introduction To Azure Databricks https://www.youtube.com/watch?v=2otrn2mvlSQ

Databricks Tutorial 2 : Azure Databricks Concepts https://www.youtube.com/watch?v=BDy5VEOtmNg

Databricks Tutorial 3 : How to use databricks free https://www.youtube.com/watch?v=iRmV9z0mIVs

✓ Databricks Tutorial 4 : databricks Workspace resources

https://www.youtube.com/watch?v=30qBSi8wMEs

Databricks Tutorial 5: How to create Notebook https://www.youtube.com/watch?v=2luy69RMXpE

databricks tutorial 6 : databricks notebooks new features https://www.youtube.com/watch?v=-o6N8qbDrk8

Databricks Tutorial 7: How to Read Json Files in Pyspark <a href="https://www.youtube.com/watch?v=eTAYSZ2NIDk">https://www.youtube.com/watch?v=eTAYSZ2NIDk</a>

Databricks Tutorial 8: Read xml files in Pyspark, https://www.youtube.com/watch?v=IhKXfgi24MU

✓ Databricks Tutorial 9: Reading excel files pyspark <a href="https://www.youtube.com/watch?v=bcRqEoEMW0k">https://www.youtube.com/watch?v=bcRqEoEMW0k</a>

Databricks Tutorial 10: How to read a url file in pyspark <a href="https://www.youtube.com/watch?v=783lhm2elKw">https://www.youtube.com/watch?v=783lhm2elKw</a>

Databricks Tutorial 11 : Custom Logging in Databricks pyspark https://www.youtube.com/watch?v=Snlp6p8px5Q

✓ Databricks Tutorial 12 : SQL Cache, spark cache, spark persistence https://www.youtube.com/watch?v=tmnYSmdrTrg

Databricks Tutorial 13: DBUTILS commands in databricks <a href="https://www.youtube.com/watch?v=qR18LMfzULQ">https://www.youtube.com/watch?v=qR18LMfzULQ</a>

✓ Databricks Tutorial 14 : Databricks Variables, Widget Types

https://www.youtube.com/watch?v=cJlfla-7-X0

✓ Databricks Tutorial 15: Databricks workspace limits,

https://www.youtube.com/watch?v=CRBVwmnL2Jk

▼ Databricks Tutorial 16: How to call one notebook from another notebook in Databricks

https://www.youtube.com/watch?v=B1DyJScg0-k

Databricks Tutorial 17: What is Single Node Cluster in Databricks, How to use single node cluster https://www.youtube.com/watch?v=tbiW8hOZY9M

✓ Databricks Tutorial 18: What are the types of Databricks Cluster Types and Difference.

https://www.youtube.com/watch?v=bSKTwgzssAk

✓ Databricks Tutorial 19 How To Create Job in Databricks, Job Scheduling In Databricks

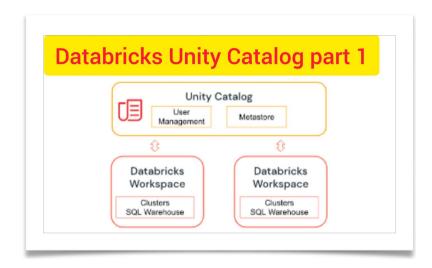
https://www.youtube.com/watch?v=8e5vkoOblxo

✓ Databricks Tutorial 20 Azure Data Engineering Architecture ADF + Databricks

https://www.youtube.com/watch?v=y49I4rXKSXc

Databricks Tutorial 21 Databricks interview questions and answers

https://www.youtube.com/watch?v=KH-rTNJSojk



▼ Databricks Unity Catalog part1 what is databricks unity catalog?

https://www.youtube.com/watch?v=Y-mL8LdCveA

Databricks Unity Catalog part2 How to Configure databricks unity catalog https://www.youtube.com/watch?v=x2RTEfdY2Bg

✓ Databricks Unity Catalog part3 How to create storage credentials and external location

https://www.youtube.com/watch?v=7BDhpsoyoWQ



What is scaling? Vertical vs horzontal scaling?

https://www.youtube.com/watch?v=wg7MYTbsSC8&t=0s

what is VCPU? CPU - Core - Threads

https://www.youtube.com/watch?v=4FQIA5FJERA

Spark Architecture Part 1: Spark Vs Hadoop MR spark vs mapreduce

https://www.youtube.com/watch?v=Ir3U0HmnfVI&t=0s

Spark Architecture Part2: master slave architecture, Single node cluster, multi note cluster

https://www.youtube.com/watch?v= DpT8q5augk&t=0s

Spark Architecture Part 3 : sparksession vs sparkcontext

https://www.youtube.com/watch?v=v2roktqTixI&t=0s

Spark Architecture Part 4 : Spark job to stage and stage to task spark job spark stages

https://www.youtube.com/watch?v=Ycwhmg6vlyc&t=0s

Spark Architecture Part 5 : Spark narrow & wide transformations

https://www.youtube.com/watch?v=uNMkRjoGkKA&t=0s

Spark Architecture Part 6 : pyspark word count program example

https://www.youtube.com/watch?v=3Nf3WcWwb88&t=0s



▼ Pyspark Scenarios 1: How to create partition by month and year in pyspark

https://www.youtube.com/watch?v=HU29qHboPN4&t=0s

pyspark scenarios 2 : how to read variable number of columns data in pyspark dataframe

https://www.youtube.com/watch?v=R7PEwQzqYmY&t=0s

Pyspark Scenarios 3 : how to skip first few rows from data file in pyspark

https://www.youtube.com/watch?v=4eFaWM6m-wk&t=0s

▼ Pyspark Scenarios 4 : how to remove duplicate rows in pyspark dataframe

https://www.youtube.com/watch?v=xw4a9qbOh-Q&t=0s

Pyspark Scenarios 5: how read all files from nested folder in pySpark dataframe

## https://www.youtube.com/watch?v=7jxFffeQHpQ&t=0s

Pyspark Scenarios 6 How to Get no of rows from each file in pyspark dataframe

https://www.youtube.com/watch?v=wp2KgEy0pTo&t=0s

Pyspark Scenarios 7 : how to get no of rows at each partition in pyspark dataframe

https://www.youtube.com/watch?v=uNTo8FneU4E&t=0s

Pyspark Scenarios 8: How to add Sequence generated surrogate key as a column in dataframe.

https://www.youtube.com/watch?v=WsU7jX3KUVM&t=0s

Pyspark Scenarios 9: How to get Individual column wise null records count

https://www.youtube.com/watch?v=2bmH3zemRe0&t=0s

▼ Pyspark Scenarios 10:Why we should not use crc32 for Surrogate Keys Generation?

https://www.youtube.com/watch?v=fg6zwaYdneU&t=0s

Pyspark Scenarios 11: how to handle double delimiter or multi delimiters in pyspark

https://www.youtube.com/watch?v=J2Fb2IAt5Eo&t=0s

Pyspark Scenarios 12: how to get 53 week number years in pyspark extract 53rd week number in spark

https://www.youtube.com/watch?v=VpYcbPRSasc&t=0s

Pyspark Scenarios 13: how to handle complex json data file in pyspark

https://www.youtube.com/watch?v=aBNQzWV UmE&t=0s

▼ Pyspark Scenarios 14: How to implement Multiprocessing in Azure Databricks

https://www.youtube.com/watch?v=OQeRPh04mz4&t=0s

▼ Pyspark Scenarios 15 : how to take table ddl backup in databricks

https://www.youtube.com/watch?v=yukhCLUo1Qk&t=0s

▼ Pyspark Scenarios 16: Convert pyspark string to date format issue dd-mm-yy old format

https://www.youtube.com/watch?v=F64rlowo4lU&t=0s

Pyspark Scenarios 17: How to handle duplicate column errors in delta table

https://www.youtube.com/watch?v=61BhN7GPtU8&t=0s

Pyspark Scenarios 18: How to Handle Bad Data in pyspark dataframe using pyspark schema

https://www.youtube.com/watch?v=yKueGqJAgwM&t=0s

Pyspark Scenarios 19: difference between OrderBy Sort and sortWithinPartitions Transformations

https://www.youtube.com/watch?v=cr8bcpvC8Hk&t=0s

▼ Pyspark Scenarios 20 : difference between coalesce and repartition in pyspark

# https://www.youtube.com/watch?v=9tRyWZvdUMM&t=0s

Pyspark Scenarios 21 : Dynamically processing complex json file in pyspark

https://www.youtube.com/watch?v=qfJb45SusMo&t=0s

▼ Pyspark Scenarios 22 : How To create data files based on the number of rows in PySpark

https://www.youtube.com/watch?v=O1SpgoFirxc&t=0s

Pyspark Scenarios 23 : How do I select a column name with spaces in PySpark?

https://www.youtube.com/watch?v=bErn1bHAyqw&t=83s

# **DELTA LAKE**



✓ introduction To Delta Lake : What is Delta Lake, What is Azure Databricks Delta lake

https://www.youtube.com/watch?v=FpxkiGPFyfM&t=0s

▼ Delta Lake tutorial 2 : How to Create delta lake table By path

https://www.youtube.com/watch?v=cbobgl3ZGuA

▼ Delta Lake Tutorial 3: How To Create delta lake table in metastore, delta lake table

https://www.youtube.com/watch?v=mFYF15IuV2w

delta lake tutorial 4 : what is schema enforcement in delta lake

https://www.youtube.com/watch?v=MnLFAjQz3Yg

✓ delta lake tutorial 5 : Delta Lake Timetravel and Audit Log

https://www.youtube.com/watch?v=fitjhpy--P4

delta lake tutorial 6 : What is Delta Lake Vacuum

https://www.youtube.com/watch?v=YQjTQ0sgE1k

delta lake tutorial 7 : What is Delta Lake Restore

https://www.youtube.com/watch?v=IK8VFuj9qKM&t=78s

delta lake tutorial 8 : What is Delta Lake Optimize

https://www.youtube.com/watch?v=P1aTktA-Xi8

# **Azure Services**



✓ Spark SQL 1: I am going to start spark sql sessions as series.

https://www.youtube.com/watch?v=TA5SYL0wzFE&t=4s

Spark SQL 2 : How to register databricks community edition

https://www.youtube.com/watch?v=Jp0Wu5t2OBA&t=0s

✓ Spark SQL 3: What is DataWarehouse? OLTP and OLAP?

https://www.youtube.com/watch?v=kFyh8hGFy6E&t=0s

Spark SQL 4: how to create database in databricks?

https://www.youtube.com/watch?v=Lg xjyXOFFc&t=0s

Spark SQL 5 : databricks file system dbfs.

https://www.youtube.com/watch?v=dcrf81rujm0&t=0s

Spark SQL 6: Spark SQL Table, Difference between Managed table and External table

https://www.youtube.com/watch?v=7o7P6JQYvKI&t=0s

Spark SQL 7: Spark SQL Views, Different types of views, Temporary views

https://www.youtube.com/watch?v=gp0BwkNuZNc&t=0s

Spark SQL 8: Spark SQL Constraints NOT NULL and CHECK Constraints

https://www.youtube.com/watch?v=DKlnHX4M88U&t=0s

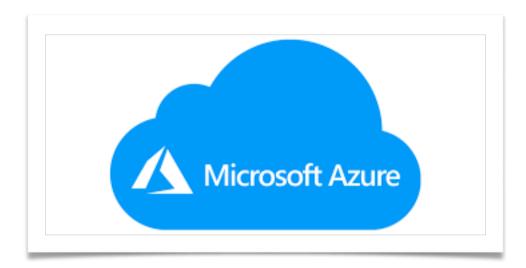
Spark SQL 9: Spark SQL DML Operations INSERT Statement

https://www.youtube.com/watch?v=Doy19FxBqOQ&t=0s

- Spark SQL 10 : Difference Between Truncate and Delete #sparksql #deltalake #pyspark https://www.youtube.com/watch?v=YezAhvK6pgY&t=0s
- Spark SQL 11: Spark SQL Delta Delete Operations and delete and restore https://www.youtube.com/watch?v=14GuUhzkb9A&t=0s
- Spark SQL 12: Spark SQL Delta Update Operations #sparksql #deltalake #pyspark https://www.youtube.com/watch?v=QDCbCnlYeiY&t=0s
- Spark SQL 13: Spark SQL Delta Restore Operations #sparksql #deltalake #pyspark <a href="https://www.youtube.com/watch?v=qUfn2GS630Y&t=0s">https://www.youtube.com/watch?v=qUfn2GS630Y&t=0s</a>
- Spark SQL 14: What is slowly changing dimension #SCD #sparksql #deltalake #pyspark <a href="https://www.youtube.com/watch?v=\_pcltsd7iKM&t=0s">https://www.youtube.com/watch?v=\_pcltsd7iKM&t=0s</a>
- Spark SQL 15: What is SCD Type 0 and SCD Type 1 #SCD #sparksql #deltalake #pyspark https://www.youtube.com/watch?v=LTeejDtR6a8&t=0s
- Spark SQL 16: What is slowly changing dimension Type 2 and Type 3 #SCD #sparksql https://www.youtube.com/watch?v=7kjrRveFNro&t=0s
- Spark SQL 17: SQL Select Statement column alias and table alias #select #sparksql https://www.youtube.com/watch?v=ue5nG6MYXpA&t=0s
- Spark SQL 18: SQL Order By and Sort By Clauses #select #sparksql https://www.youtube.com/watch?v=uaRg-sCysYs&t=0s

Spark SQL 19: SQL Join Types inner join full join semi #select #sparksql https://www.youtube.com/watch?v=QmHp6Bbp1VA&t=0s

- Spark SQL 20: SQL Set Operators #sparksql #sqlsetoperators #sql #union https://www.youtube.com/watch?v=sHwmfDmQei8&t=0s
- Spark SQL 21: spark SQL group by clause and having clause https://www.youtube.com/watch?v=TU1VH6B4Xaw&t=0s
- Spark SQL 22: Advanced Group By Grouping Sets Cube Rollup https://www.youtube.com/watch?v=nj6bNsRJTZk&t=0s
- Spark SQL 23: Window functions Rank and dense rank <a href="https://www.youtube.com/watch?v=Te2d7eUw51E&t=0s">https://www.youtube.com/watch?v=Te2d7eUw51E&t=0s</a>



Cloud Fundamentals part 1: what is datalake.

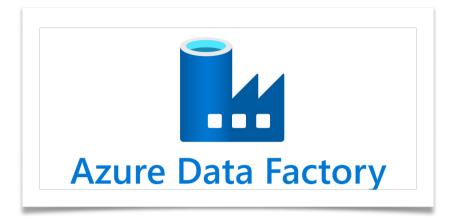
https://www.youtube.com/watch?v=HJKu9fPLBBo

✓ azure fundamentals part 2 : What is data center , type of cloud services

https://www.youtube.com/watch?v=oLaP898XO8g&t=0s

✓ azure fundamentals part 3: types of cloud service models #cloudservices

https://www.youtube.com/watch?v=33t4ojvqlpk



✓ Introduction to azure data factory tutorial part 1

https://www.youtube.com/watch?v=oPNWFPsmOK4

Azure data factory 2 : adf components

https://www.youtube.com/watch?v=p5cF3QXGtqU&t=0s

✓Azure Data Factory 3 : Adls gen1 to gen2 migration

https://www.youtube.com/watch?v=XE5jPzds474&t=0s

✓ Azure Data Factory 4 : How to Copy Multiple files from Gen 1 to Gen2

https://www.youtube.com/watch?v=YS\_0tr-hwjQ&t=0s18

✓ Azure Data Factory 5 : self hosted integration runtime configuration

https://www.youtube.com/watch?v=D3vPuG9JTwI&t=0s

Azure Data Factory 6: How to migrate Onpremises Oracle data to azure datalake gen2

https://www.youtube.com/watch?v=h1LynU-T7OE&t=0s

✓Azure Data Factory 7: What is Binary File Dataset and when we will use this?

https://www.youtube.com/watch?v=yw5tSZc3oD4&t=0s

✓ Azure Data Factory 8 : how to split one file into multiple files using git-scm

https://www.youtube.com/watch?v=zto8JnspkQE

✓ Azure Data Factory 9 : what is linked self hosted integrated runtime

https://www.youtube.com/watch?v=KcLRWX5CSXA

✓ Azure Data Factory 10 : How do i resolve this error self-hosted IR for file linked service

https://www.youtube.com/watch?v=fv4R74YxOSs

✓ Azure Data Factory 11 : how to migrate onprem files to adls gen2

https://www.youtube.com/watch?v=GfnJ26IQOHA

#### TR RAVEENDRA



✓ Azure Synapse Tutorial 1 : what is MPP architecture? What is MPP Warehouse

https://www.youtube.com/watch?v=rdFm0Fvp4r4

✓ Azure Synapse Tutorial 2 : Azure Synapse DW introduction

https://www.youtube.com/watch?v=5190fPv0MnU

✓ Azure Synapse Tutorial 3 : azure synapse Distribution types

https://www.youtube.com/watch?v=Zsw58YeKy0Q

Azure Synapse Tutorial 4 : what is hash distribution in synapse

https://www.youtube.com/watch?v=CgdJQ7anxgU

✓ Azure Synapse Tutorial 5 : What is round robin partition

YouTube Channel: techlake

### https://www.youtube.com/watch?v=oTjAWBAoE4s

Azure Synapse Tutorial 6: What is replicate distribution or Broadcast Distribution in azure synapse

https://www.youtube.com/watch?v=u XYWDH3i7I

Azure Synapse Tutorial 7 : Azure Synapse dwh interview questions and answers

https://www.youtube.com/watch?v=EMmJ8XmkqBo

✓ Azure Synapse Tutorial 8 : Dedicated sql pool resource classes

https://www.youtube.com/watch?v=DghCPpZ5vkQ

✓ Difference between Synapses Analytics and Synapses Dedicated SQL pool (Azure SQL DWH)

https://www.youtube.com/watch?v=MD TztbAgX8