

## data\_loading

Python



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Abdullah Khan's Cluster

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```
from pyspark.sql import SparkSession
from pyspark.sql.functions import col

# Initialize Spark Session
spark = SparkSession.builder.appName("DataLoading").getOrCreate()

# Sample data
data = [(1, "Abdullah", 1000), (2, "Sharma", 1500), (3, "Suman", 1200)]
columns = ["ID", "Name", "Salary"]

# Create DataFrame
df = spark.createDataFrame(data, columns)

# Write DataFrame to Delta table
df.write.format("delta").mode("overwrite").save("/delta/sample_data")

print("Data loaded and saved as Delta table.")
```

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data\_transformation Python ☆

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```
from pyspark.sql.functions import col

# Read from Delta table
df = spark.read.format("delta").load("/delta/sample_data")

# Apply transformation (increase salary by 10%)
df_transformed = df.withColumn("Salary", col("Salary") * 1.1)

# Save the transformed data to Delta
df_transformed.write.format("delta").mode("overwrite").save("/delta/transformed_data")

print("Data transformed and saved.")
```

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data\_analysis

Python



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Schedule (1)

Share

Workspace

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```
# Read from transformed Delta table
df = spark.read.format("delta").load("/delta/transformed_data")

# Perform analysis: Calculate the average salary
df.groupBy().avg("Salary").show()

print("Data analysis complete.")
```

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