

Spark by {Examples} (https://sparkbyexamples.com/)

Spark Tutorial

[Spark – Installation on Windows \(https://sparkbyexamples.com/tutorial/\)](https://sparkbyexamples.com/tutorial/)
[spark/apache-spark-installation-on-windows/](https://sparkbyexamples.com/spark/apache-spark-installation-on-windows/)

[Spark – Installation on Linux | Ubuntu \(https://sparkbyexamples.com/spark/spark-installation-on-linux-ubuntu/\)](https://sparkbyexamples.com/spark/spark-installation-on-linux-ubuntu/)

[Spark – Cluster Setup with Hadoop Yarn \(https://sparkbyexamples.com/spark/spark-setup-on-hadoop-yarn/\)](https://sparkbyexamples.com/spark/spark-setup-on-hadoop-yarn/)

[Spark – Web/Application UI \(https://sparkbyexamples.com/spark/spark-web-ui-understanding/\)](https://sparkbyexamples.com/spark/spark-web-ui-understanding/)

[Spark – Setup with Scala and IntelliJ \(https://sparkbyexamples.com/spark/spark-setup-run-with-scala-intellij/\)](https://sparkbyexamples.com/spark/spark-setup-run-with-scala-intellij/)

[Spark – How to Run Examples From this Site on IntelliJ IDEA \(https://sparkbyexamples.com/spark/how-to-run-spark-examples-from-intellij/\)](https://sparkbyexamples.com/spark/how-to-run-spark-examples-from-intellij/)

[Spark – SparkSession \(https://sparkbyexamples.com/spark/sparksession-explained-with-examples/\)](https://sparkbyexamples.com/spark/sparksession-explained-with-examples/)

[Spark – SparkContext \(https://sparkbyexamples.com/spark/spark-sparkcontext/\)](https://sparkbyexamples.com/spark/spark-sparkcontext/)

Spark RDD Tutorial

[Spark RDD – Parallelize \(https://sparkbyexamples.com/apache-spark-rdd/how-to-create-an-rdd-using-parallelize/\)](https://sparkbyexamples.com/apache-spark-rdd/how-to-create-an-rdd-using-parallelize/)

[PySpark \(https://sparkbyexamples.com/pyspark-tutorial/\)](https://sparkbyexamples.com/pyspark-tutorial/)

[Hive \(https://sparkbyexamples.com/apache-hive-tutorial/\)](https://sparkbyexamples.com/apache-hive-tutorial/)

[HBase \(https://sparkbyexamples.com/apache-hbase-tutorial/\)](https://sparkbyexamples.com/apache-hbase-tutorial/)

[Kafka \(https://sparkbyexamples.com/apache-kafka-tutorial/\)](https://sparkbyexamples.com/apache-kafka-tutorial/)

[FAQ's Spark pivot\(\) function is used to pivot/rotate the data from one DataFrame/Dataset column into multiple columns \(transform row to column\) and unpivot is used to transform it back \(transform columns to rows\).](https://sparkbyexamples.com/spark-pivot/)

[More \(https://sparkbyexamples.com/\)](https://sparkbyexamples.com/)

Data Science Online Course

Live Instructor-Led Classes & Gain Hands-on Exposure to Data Science, R, SAS, Python & AI.

How to Pivot and Unpivot a Spark DataFrame

Apache Spark

[Spark pivot\(\) function is used to](https://sparkbyexamples.com/spark-pivot/)

[pivot/rotate the data from one DataFrame/Dataset column into multiple columns \(transform row to column\) and unpivot is used to transform it back \(transform columns to rows\).](https://sparkbyexamples.com/spark-pivot/)

In Collaboration with IBM & Designed Professionals to Get Best Jobs in Top

Intellipaat



[Spark RDD – Read text file
\(https://sparkbyexamples.com/apache-spark-rdd/spark-read-multiple-text-files-into-a-single-rdd/\)](https://sparkbyexamples.com/apache-spark-rdd/spark-read-multiple-text-files-into-a-single-rdd/)

[Spark RDD – Read CSV
\(https://sparkbyexamples.com/apache-spark-rdd/spark-load-csv-file-into-rdd/\)](https://sparkbyexamples.com/apache-spark-rdd/spark-load-csv-file-into-rdd/)

[Spark RDD – Create RDD
\(https://sparkbyexamples.com/apache-spark-rdd/different-ways-to-create-spark-rdd/\)](https://sparkbyexamples.com/apache-spark-rdd/different-ways-to-create-spark-rdd/)

[Spark RDD – Create Empty RDD
\(https://sparkbyexamples.com/apache-spark-rdd/spark-how-to-create-an-empty-rdd/\)](https://sparkbyexamples.com/apache-spark-rdd/spark-how-to-create-an-empty-rdd/)

[Spark RDD – Transformations
\(https://sparkbyexamples.com/apache-spark-rdd/spark-rdd-transformations/\)](https://sparkbyexamples.com/apache-spark-rdd/spark-rdd-transformations/)

[Spark RDD – Actions
\(https://sparkbyexamples.com/apache-spark-rdd/spark-rdd-actions/\)](https://sparkbyexamples.com/apache-spark-rdd/spark-rdd-actions/)

[Spark RDD – Pair Functions
\(https://sparkbyexamples.com/apache-spark-rdd/spark-pair-rdd-functions/\)](https://sparkbyexamples.com/apache-spark-rdd/spark-pair-rdd-functions/)

[Spark RDD – Repartition and Coalesce
\(https://sparkbyexamples.com/spark/spark-repartition-vs-coalesce/\)](https://sparkbyexamples.com/spark/spark-repartition-vs-coalesce/)

[Spark RDD – Shuffle Partitions
\(https://sparkbyexamples.com/spark/spark-shuffle-partitions/\)](https://sparkbyexamples.com/spark/spark-shuffle-partitions/)

[Spark RDD – Cache vs Persist
\(https://sparkbyexamples.com/spark/spark-difference-between-cache-and-persist/\)](https://sparkbyexamples.com/spark/spark-difference-between-cache-and-persist/)

[Spark RDD – Persistence Storage Levels
\(https://sparkbyexamples.com/spark/spark-persistence-storage-levels/\)](https://sparkbyexamples.com/spark/spark-persistence-storage-levels/)

In this article, I will explain how to use pivot() SQL function to transpose one or multiple rows into columns.

Pivot() is an aggregation where one of the grouping columns values transposed into individual columns with distinct data.

- [Pivot Spark DataFrame](#)
- [Pivot Performance improvement in Spark 2.0](#)
- [Unpivot Spark DataFrame](#)
- [Pivot or Transpose without aggregation](#)

Let's create a DataFrame to work with.

```
val data = Seq(("Banana",1000,"USA"),("Orange",2000,"USA"),("Orange",2000,"USA"),("Carrots",1200,"China"),("Banana",2000,"Canada"),("Banana",2000,"Canada"))

import spark.sqlContext.implicit
val df = data.toDF("Product","Amount","Country")
df.show()
```

DataFrame 'df' consists of 3 columns Product, Amount and Country as shown below.

Data Science Online C

Intellipaat

Data Science
Online Course

Live Instructor-Led
Classes & Certification

[Spark RDD – Broadcast](#)

[Variables](#)

(<https://sparkbyexamples.com/spark/spark-broadcast-variables/>)

[Spark RDD – Accumulator](#)

[Variables](#)

(<https://sparkbyexamples.com/spark/spark-accumulators/>)

[Spark RDD – Convert RDD to DataFrame](#)

(<https://sparkbyexamples.com/apache-spark-rdd/convert-spark-rdd-to-dataframe-dataset/>)

Spark SQL Tutorial

[Spark SQL – Create](#)

[DataFrame](#)

(<https://sparkbyexamples.com/spark/different-ways-to-create-a-spark-dataframe/>)

[Spark SQL – Select Columns](#)

(<https://sparkbyexamples.com/spark/spark-select-columns-from-dataframe/>)

[Spark SQL – Add and Update Column \(withColumn\)](#)

(<https://sparkbyexamples.com/spark/spark-dataframe-withcolumn/>)

[Spark SQL – Rename Nested Column](#)

(<https://sparkbyexamples.com/spark/rename-a-column-on-spark-dataframes/>)

[Spark SQL – Drop column](#)

(<https://sparkbyexamples.com/spark/spark-drop-column-from-dataframe-dataset/>)

[Spark SQL – Where | Filter](#)

(<https://sparkbyexamples.com/spark/spark-dataframe-where-filter/>)

[Spark SQL – When Otherwise](#)

(<https://sparkbyexamples.com/spark/spark-case-when-otherwise-example/>)

```
+-----+-----+-----+
| Product | Amount | Country |
+-----+-----+-----+
| Banana  | 1000   | USA     |
| Carrots | 1500   | USA     |
| Beans   | 1600   | USA     |
| Orange  | 2000   | USA     |
| Orange  | 2000   | USA     |
| Banana  | 400    | China   |
| Carrots | 1200   | China   |
| Beans   | 1500   | China   |
| Orange  | 4000   | China   |
| Banana  | 2000   | Canada  |
| Carrots | 2000   | Canada  |
| Beans   | 2000   | Mexico  |
+-----+-----+-----+
```

Pivot Spark DataFrame

Spark SQL provides `pivot()` function to rotate the data from one column into multiple columns (transpose row to column). It is an aggregation where one of the grouping columns values transposed into individual columns with distinct data. From the above DataFrame, to get the total amount exported to each country of each product will do group by Product, pivot by Country, and the sum of Amount.

```
val pivotDF = df.groupBy("Product")
                  .pivot("Country")
                  .sum("Amount")
pivotDF.show()
```

This will transpose the countries from DataFrame rows into columns and produces below output. Where ever data is not present, it represents as null by default.

Classes & Gain
Hands-on Exposure
to Data Science
SAS, Python &

Intellipaat

Open

IIT Madras
Data Science
& AI

Learn from IIT
Madras Professors
& Industry
Practitioners.
Advance Your
Career Now!

[Spark SQL – Collect data to Driver](https://sparkbyexamples.com/spark/spark-dataframe-collect/)
(<https://sparkbyexamples.com/spark/spark-dataframe-collect/>)

[Spark SQL – Distinct](https://sparkbyexamples.com/spark/spark-remove-duplicate-rows/)
(<https://sparkbyexamples.com/spark/spark-remove-duplicate-rows/>)

[Spark SQL- Pivot Table DataFrame](https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/)
(<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/>)

[Spark SQL – Data Types](https://sparkbyexamples.com/spark/spark-sql-dataframe-data-types/)
(<https://sparkbyexamples.com/spark/spark-sql-dataframe-data-types/>)

[Spark SQL – StructType | StructField](https://sparkbyexamples.com/spark/spark-sql-structtype-on-dataframe/)
(<https://sparkbyexamples.com/spark/spark-sql-structtype-on-dataframe/>)

[Spark SQL – Schema](https://sparkbyexamples.com/spark/spark-schema-explained-with-examples/)
(<https://sparkbyexamples.com/spark/spark-schema-explained-with-examples/>)

[Spark SQL – Groupby](https://sparkbyexamples.com/spark/using-groupby-on-dataframe/)
(<https://sparkbyexamples.com/spark/using-groupby-on-dataframe/>)

[Spark SQL – Sort DataFrame](https://sparkbyexamples.com/spark/spark-how-to-sort-dataframe-column-explained/)
(<https://sparkbyexamples.com/spark/spark-how-to-sort-dataframe-column-explained/>)

[Spark SQL – Join Types](https://sparkbyexamples.com/spark/spark-sql-dataframe-join/)
(<https://sparkbyexamples.com/spark/spark-sql-dataframe-join/>)

[Spark SQL – Union and UnionAll](https://sparkbyexamples.com/spark/spark-dataframe-union-and-union-all/)
(<https://sparkbyexamples.com/spark/spark-dataframe-union-and-union-all/>)

[Spark SQL – map\(\) vs mapPartitions\(\)](https://sparkbyexamples.com/spark/spark-map-vs-mappartitions-transformation/)
(<https://sparkbyexamples.com/spark/spark-map-vs-mappartitions-transformation/>)

Product	Canada	China	Mexico	US
Orange	null	4000	null	400
Beans	null	1500	2000	160
Banana	2000	400	null	100
Carrots	2000	1200	null	150

Pivot Performance

improvement in Spark 2.0

Spark 2.0 on-wards performance has been improved on Pivot, however, if you are using lower version; note that pivot is a very expensive operation hence, it is recommended to provide column data (if known) as an argument to function as shown below.

```
val countries = Seq("USA", "China")
val pivotDF = df.groupBy("Product")
pivotDF.show()
```

Another approach is to do two-phase aggregation. Spark 2.0 uses this implementation in order to improve the performance [Spark-13749](https://issues.apache.org/jira/browse/SPARK-13749)
(<https://issues.apache.org/jira/browse/SPARK-13749>)


```
val pivotDF = df.groupBy("Product")
    .sum("Amount")
    .groupBy("Product")
    .pivot("Country")
    .sum("sum(Amount)")
pivotDF.show()
```

Above two examples returns the same output but with better performance.

IntelliPaat

Open

Data Science Online Course

Live Instructor-Led
Classes & Gain
Hands-on Exposure
to Data Science
SAS, Python & 

[Spark SQL – foreach\(\) vs foreachPartition\(\).
\(https://sparkbyexamples.com/spark/spark-foreachpartition-vs-foreach-explained/\).](https://sparkbyexamples.com/spark/spark-foreachpartition-vs-foreach-explained/)

[Spark SQL – map\(\) vs flatMap\(\).
\(https://sparkbyexamples.com/spark/spark-map-vs-flatmap-with-examples/\).](https://sparkbyexamples.com/spark/spark-map-vs-flatmap-with-examples/)

[Spark SQL – Persist and Cache
\(https://sparkbyexamples.com/spark/spark-dataframe-cache-and-persist-explained/\).](https://sparkbyexamples.com/spark/spark-dataframe-cache-and-persist-explained/)

[Spark SQL – UDF \(User Defined Functions\).
\(https://sparkbyexamples.com/spark/spark-sql-udf/\).](https://sparkbyexamples.com/spark/spark-sql-udf/)

[Spark SQL – Array \(ArrayType\) Column
\(https://sparkbyexamples.com/spark/spark-array-arraytype-dataframe-column/\).](https://sparkbyexamples.com/spark/spark-array-arraytype-dataframe-column/)

[Spark SQL – Map \(MapType\) column
\(https://sparkbyexamples.com/spark/spark-dataframe-map-maptypes-column/\).](https://sparkbyexamples.com/spark/spark-dataframe-map-maptypes-column/)

[Spark SQL – Flatten Nested Struct Column
\(https://sparkbyexamples.com/spark/spark-flatten-nested-struct-column/\).](https://sparkbyexamples.com/spark/spark-flatten-nested-struct-column/)

[Spark SQL – Flatten Nested Array Column
\(https://sparkbyexamples.com/spark/spark-flatten-nested-array-column-to-single-column/\).](https://sparkbyexamples.com/spark/spark-flatten-nested-array-column-to-single-column/)

[Spark SQL – Explode Array & Map Columns
\(https://sparkbyexamples.com/spark/explode-spark-array-and-map-dataframe-column/\).](https://sparkbyexamples.com/spark/explode-spark-array-and-map-dataframe-column/)

[Spark SQL – Sampling
\(https://sparkbyexamples.com/spark/spark-sampling-with-examples/\).](https://sparkbyexamples.com/spark/spark-sampling-with-examples/)

In Collaboration with IBM & Designed Professionals to Get Best Jobs in Top

Intellipaat

Unpivot Spark DataFrame

Unpivot is a reverse operation, we can achieve by rotating column values into rows values. Spark SQL doesn't have unpivot function hence will use the `stack()` function. Below code converts column countries to row.

```
//unpivot
val unpivotDF = pivotDF.select($
  expr("stack(3, 'Canada', Canada,
    .where('Total is not null')
  unpivotDF.show()
```

It converts pivoted column "country" to rows.

```
+-----+-----+-----+
| Product | Country | Total |
+-----+-----+-----+
| Orange  | China   | 4000 |
| Beans   | China   | 1500 |
| Beans   | Mexico  | 2000 |
| Banana  | Canada  | 2000 |
| Banana  | China   | 400   |
| Carrots | Canada  | 2000 |
| Carrots | China   | 1200 |
+-----+-----+-----+
```

Intellipaat

Open

Data Science Online Course

Live Instructor-Led Classes & Gain Hands-on Exposure to Data Science SAS, Python & ^

[Spark SQL – Partitioning
\(https://sparkbyexamples.com/
spark/spark-partitioning-
understanding/\)](https://sparkbyexamples.com/spark/spark-partitioning-understanding/)

Spark SQL Functions

[Spark SQL String Functions
\(https://sparkbyexamples.com/
spark/usage-of-spark-sql-
string-functions/\)](https://sparkbyexamples.com/spark/usage-of-spark-sql-string-functions/)

[Spark SQL Date and
Timestamp Functions
\(https://sparkbyexamples.com/
spark/spark-sql-date-and-time-
functions/\)](https://sparkbyexamples.com/spark/spark-sql-date-and-time-functions/)

[Spark SQL Array Functions
\(https://sparkbyexamples.com/
spark/spark-sql-array-
functions/\)](https://sparkbyexamples.com/spark/spark-sql-array-functions/)

[Spark SQL Map Functions
\(https://sparkbyexamples.com/
spark/spark-sql-map-
functions/\)](https://sparkbyexamples.com/spark/spark-sql-map-functions/)

[Spark SQL Sort Functions
\(https://sparkbyexamples.com/
spark/spark-sql-sort-functions/\)](https://sparkbyexamples.com/spark/spark-sql-sort-functions/)

[Spark SQL Aggregate
Functions
\(https://sparkbyexamples.com/
spark/spark-sql-aggregate-
functions/\)](https://sparkbyexamples.com/spark/spark-sql-aggregate-functions/)

[Spark SQL Window Functions
\(https://sparkbyexamples.com/
spark/spark-sql-window-
functions/\)](https://sparkbyexamples.com/spark/spark-sql-window-functions/)

[Spark SQL JSON Functions
\(https://sparkbyexamples.com/
spark/spark-most-used-json-
functions-with-examples/\)](https://sparkbyexamples.com/spark/spark-most-used-json-functions-with-examples/)

Spark Data Source API

[Spark – Read & Write CSV file
\(https://sparkbyexamples.com/
spark/spark-read-csv-file-into-
dataframe/\)](https://sparkbyexamples.com/spark/spark-read-csv-file-into-dataframe/)

[Spark – Read and Write JSON
file
\(https://sparkbyexamples.com/](https://sparkbyexamples.com/spark/spark-read-and-write-json-file/)

Transpose or Pivot without aggregation

Can we do Spark DataFrame transpose or pivot without aggregation?

off course you can, but unfortunately, you can't achieve using Pivot function. However, pivoting or transposing DataFrame structure without aggregation from rows to columns and columns to rows can be easily done using Spark and Scala hack. please refer to [this](https://stackoverflow.com/questions/49392683/transpose-dataframe-without-aggregation-in-spark-with-scala)
(<https://stackoverflow.com/questions/49392683/transpose-dataframe-without-aggregation-in-spark-with-scala>) example.


Conclusion:


We have seen how to Pivot DataFrame (transpose row to column) with scala example and Unpivot it back using Spark SQL functions. And also have seen how Spark 2.0 changes improves performance by doing two-phase aggregation.

The complete code can be downloaded from [GitHub](https://github.com/sparkbyexamples/spark-examples/blob/master/spark-sql-examples/src/main/scala/com/sparkbyexamples/spark/dataframe/functions/PivotExample.scala)
(<https://github.com/sparkbyexamples/spark-examples/blob/master/spark-sql-examples/src/main/scala/com/sparkbyexamples/spark/dataframe/functions/PivotExample.scala>)

Happy Learning !!

Share this:

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=facebook&nb=1>)

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=reddit&nb=1>)

Intellipaat

Open

Data Science Online Course

Live Instructor-Led
Classes & Gain
Hands-on Exposure
to Data Scienc
SAS, Python & ^

[spark/spark-read-and-write-json-file/](#)

[Spark – Read & Write Parquet file](#)
(<https://sparkbyexamples.com/spark/spark-read-write-dataframe-parquet-example/>).

[Spark – Read & Write XML file](#)
(<https://sparkbyexamples.com/spark/spark-read-write-xml/>).

[Spark – Read & Write Avro files](#)
(<https://sparkbyexamples.com/spark/read-write-avro-file-spark-dataframe/>).

[Spark – Read & Write Avro files \(Spark version 2.3.x or earlier\)](#)
(<https://sparkbyexamples.com/spark/using-avro-data-files-from-spark-sql-2-3-x/>).

[Spark – Read & Write HBase using “hbase-spark” Connector](#)
(<https://sparkbyexamples.com/spark/spark-read-write-using-hbase-spark-connector/>).


[Spark – Read & Write from HBase using Hortonworks](#)
(<https://sparkbyexamples.com/spark/create-spark-dataframe-from-hbase-using-hortonworks/>).

[Spark – Read & Write ORC file](#)
(<https://sparkbyexamples.com/spark/spark-read-orc-file-into-dataframe/>).

[Spark – Read Binary File](#)
(<https://sparkbyexamples.com/spark/spark-read-binary-file-into-dataframe/>).


Spark Streaming & Kafka


[Spark Streaming – OutputModes](#)
(<https://sparkbyexamples.com/spark/spark-streaming-outputmode/>).

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=pinterest&nb=1>)

2

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=tumblr&nb=1>)

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=pocket&nb=1>)

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=linkedin&nb=1>)

 (<https://sparkbyexamples.com/spark/how-to-pivot-table-and-unpivot-a-spark-dataframe/?share=twitter&nb=1>)

TAGS: GROUPBY
([HTTPS://SPARKBYEXAMPLES.COM/TAG/GROUPBY/](https://sparkbyexamples.com/tag/groupby/)), **PIVOT**
([HTTPS://SPARKBYEXAMPLES.COM/TAG/PIVOT/](https://sparkbyexamples.com/tag/pivot/)), **STACK**
([HTTPS://SPARKBYEXAMPLES.COM/TAG/STACK/](https://sparkbyexamples.com/tag/stack/)), **TRANSPONSE**
([HTTPS://SPARKBYEXAMPLES.COM/TAG/TRANSPONSE/](https://sparkbyexamples.com/tag/transponse/)), **UNPIVOT**
([HTTPS://SPARKBYEXAMPLES.COM/TAG/UNPIVOT/](https://sparkbyexamples.com/tag/unpivot/)).



NNK

(<https://sparkbyexamples.com/author/admin/>).

(<https://sparkbyexamples.com/author/admin/>).

SparkByExamples.com is a Big Data and Spark examples community page, all examples are simple and easy to understand and well tested in our development environment [Read more ..](#)
(<https://sparkbyexamples.com/about-sparkbyexamples/>).

Leave a Reply

Intellipaat

Open



[Spark Streaming – Reading Files From Directory](https://sparkbyexamples.com/spark/spark-streaming-read-json-files-from-directory/)
(<https://sparkbyexamples.com/spark/spark-streaming-read-json-files-from-directory/>).

[Spark Streaming – Reading Data From TCP Socket](https://sparkbyexamples.com/spark/spark-streaming-from-tcp-socket/)
(<https://sparkbyexamples.com/spark/spark-streaming-from-tcp-socket/>).

[Spark Streaming – Processing Kafka Messages in JSON Format](https://sparkbyexamples.com/spark/spark-streaming-with-kafka/)
(<https://sparkbyexamples.com/spark/spark-streaming-with-kafka/>).

[Spark Streaming – Processing Kafka messages in AVRO Format](https://sparkbyexamples.com/spark/spark-streaming-consume-and-produce-kafka-messages-in-avro-format/)
(<https://sparkbyexamples.com/spark/spark-streaming-consume-and-produce-kafka-messages-in-avro-format/>).

[Spark SQL Batch – Consume & Produce Kafka Message](https://sparkbyexamples.com/spark/spark-batch-processing-produce-consume-kafka-topic/)
(<https://sparkbyexamples.com/spark/spark-batch-processing-produce-consume-kafka-topic/>).

Data Science Online Course

Live Instructor-Led
Classes & Gain
Hands-on Exposure
to Data Science
SAS, Python &

Intellipaat

[Open](#)

Data Science Online Course

Live Instructor-Led
Classes & Gain
Hands-on Exposure
to Data Science
SAS, Python &

Intellipaat

Open

Categories

Apache Hadoop
(<https://sparkbyexamples.com/category/hadoop/>)

Apache Spark
(<https://sparkbyexamples.com/category/spark/>)

Apache Spark Streaming
(<https://sparkbyexamples.com/category/spark/apache-spark-streaming/>)

Apache Kafka
(<https://sparkbyexamples.com/category/kafka/>)

Apache HBase
(<https://sparkbyexamples.com/category/hbase/>)

Apache Cassandra
(<https://sparkbyexamples.com/category/cassandra/>)

Recent Posts

Spark regex_replace() – Replace String Value
(https://sparkbyexamples.com/spark/spark-regex_replace-replace-string-value/)

How to Run a PySpark Script from Python?
(<https://sparkbyexamples.com/pyspark/run-pyspark-script-from-python-subprocess/>)

Spark SQL like() Using Wildcard Example
(<https://sparkbyexamples.com/spark/spark-sql-like-using-wildcard-example/>)

Spark isin() & IS NOT IN Operator Example
(<https://sparkbyexamples.com/spark/spark-isin-is-not-in-operator-example/>)

Spark – Get Size/Length of Array & Map Column
(<https://sparkbyexamples.com/spark/spark-get-size-length-of-array-map-column/>)

About SparkByExamples.Com

SparkByExamples.com is a Big Data and Spark examples community page, all examples are simple and easy to understand, and well tested in our development environment Read more ..
(<https://sparkbyexamples.com/about-sparkbyexamples/>)

Follow Us

Snowflake Database
(<https://sparkbyexamples.com/category/snowflake/>)

H2O Sparkling Water
(<https://sparkbyexamples.com/category/h2o-sparkling-water/>)

PySpark
(<https://sparkbyexamples.com/category/pyspark/>)

Spark Using Length/Size Of a DataFrame Column

(<https://sparkbyexamples.com/spark/spark-using-length-size-of-a-dataframe-column/>)

Spark rlike() Working with Regex
Matching Examples
(<https://sparkbyexamples.com/spark/spark-rlike-regex-matching-examples/>)

Spark Check String Column Has Numeric Values

(<https://sparkbyexamples.com/spark/spark-check-string-column-has-numeric-values/>)

Spark Check Column Data Type is Integer or String

(<https://sparkbyexamples.com/spark/spark-check-column-data-type-is-integer-or-string/>)

(https:	(https:
---------	---------

//www. //www.

(https:	facebo	linkedi	(https:
---------	--------	---------	---------

//twitter ok.co n.com/ //github

r.com/ m/spar in/n- b.com/

sparkb kbyex nk- spark-

yexam ample b860a exam

ples) s/) 8193/) les/)