

## Resultant execution SPARK TP4 :

```
./spark-submit --driver-memory 3G --executor-memory 4G --class  
com.sparkProject.JobML --master spark://dhcpwif-23-55.enst.fr:7077 /Users/  
stephanetrublereau/Documents/tp_spark/target/scala-2.11/tp_spark-assembly-1.0.jar
```

Fin résultat execution :

**16/11/16 16:52:13 WARN LogisticRegression: LogisticRegression training  
finished but the result is not converged because: max iterations reached**

```
+-----+-----+  
|      features|label|prediction|  
+-----+-----+  
| (111,[0,3,6,13,41...| 1.0|    0.0|  
| [0.634002937,1.20...| 1.0|    1.0|  
| [0.675649486,2.55...| 1.0|    0.0|  
| [0.837491331,2.72...| 1.0|    1.0|  
| [0.84338011,8.21E...| 1.0|    1.0|  
| [0.927859821,5.49...| 1.0|    1.0|  
| [1.005207007,5.09...| 1.0|    1.0|  
| [1.118549717,3.12...| 1.0|    1.0|  
| [1.287076762,1.19...| 1.0|    1.0|  
| [1.311555568,5.54...| 1.0|    1.0|  
| [1.538188437,6.86...| 1.0|    0.0|  
| [1.653893465,4.02...| 1.0|    1.0|  
| [1.720861324,6.3E...| 1.0|    0.0|  
| [1.732345491,3.28...| 1.0|    1.0|  
| [1.916944254,6.11...| 1.0|    1.0|  
| [1.921437396,2.12...| 1.0|    1.0|  
| [1.954524342,3.30...| 1.0|    1.0|  
| [1.973760926,9.7E...| 1.0|    0.0|  
| [2.00541269,1.065...| 1.0|    1.0|  
| [2.03387914,1.415...| 1.0|    1.0|
```

+-----+-----+  
only showing top 20 rows

**ROC BinaryClassificationEvaluator : 0.9450498949579832**

### Détail complet du CR produit

16/11/16 16:51:44 WARN NativeCodeLoader: Unable to load native-hadoop library  
for your platform... using builtin-java classes where applicable

16/11/16 16:51:45 WARN SparkContext: Use an existing SparkContext, some  
configuration may not take effect.

SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".

SLF4J: Defaulting to no-operation (NOP) logger implementation

SLF4J: See <http://www.slf4j.org/codes.html#StaticLoggerBinder> for further details.

16/11/16 16:51:49 WARN Utils: Truncated the string representation of a plan since it

was too large. This behavior can be adjusted by setting  
'spark.debug.maxToStringFields' in SparkEnv.conf.

(nombre de ligne : ,6410)

(nombre de colonnes : ,113)

koi\_period  
koi\_period\_err1  
koi\_period\_err2  
koi\_time0bk  
koi\_time0bk\_err1  
koi\_time0bk\_err2  
koi\_time0  
koi\_time0\_err1  
koi\_time0\_err2  
koi\_eccen  
koi\_impact  
koi\_impact\_err1  
koi\_impact\_err2  
koi\_duration  
koi\_duration\_err1  
koi\_duration\_err2  
koi\_depth  
koi\_depth\_err1  
koi\_depth\_err2  
koi\_ror  
koi\_ror\_err1  
koi\_ror\_err2  
koi\_srho  
koi\_srho\_err1  
koi\_srho\_err2  
koi\_prad  
koi\_prad\_err1  
koi\_prad\_err2  
koi\_sma  
koi\_incl  
koi\_teq  
koi\_insol  
koi\_insol\_err1  
koi\_insol\_err2  
koi\_dor  
koi\_dor\_err1  
koi\_dor\_err2  
koi\_ldm\_coeff4  
koi\_ldm\_coeff3  
koi\_ldm\_coeff2  
koi\_ldm\_coeff1  
koi\_max\_sngle\_ev  
koi\_max\_mult\_ev  
koi\_model\_snr  
koi\_count

koi\_num\_transits  
koi\_tce\_plnt\_num  
koi\_quarters  
koi\_steff  
koi\_steff\_err1  
koi\_steff\_err2  
koi\_slogg  
koi\_slogg\_err1  
koi\_slogg\_err2  
koi\_smet  
koi\_smet\_err1  
koi\_smet\_err2  
koi\_srad  
koi\_srad\_err1  
koi\_srad\_err2  
koi\_smass  
koi\_smass\_err1  
koi\_smass\_err2  
ra  
dec  
koi\_kepmag  
koi\_gmag  
koi\_rmag  
koi\_imag  
koi\_zmag  
koi\_jmag  
koi\_hmag  
koi\_kmag  
koi\_fwm\_stat\_sig  
koi\_fwm\_sra  
koi\_fwm\_sra\_err  
koi\_fwm\_sdec  
koi\_fwm\_sdec\_err  
koi\_fwm\_srao  
koi\_fwm\_srao\_err  
koi\_fwm\_sdeco  
koi\_fwm\_sdeco\_err  
koi\_fwm\_prao  
koi\_fwm\_prao\_err  
koi\_fwm\_pdeco  
koi\_fwm\_pdeco\_err  
koi\_dicco\_mra  
koi\_dicco\_mra\_err  
koi\_dicco\_mdec  
koi\_dicco\_mdec\_err  
koi\_dicco\_msky  
koi\_dicco\_msky\_err  
koi\_dicco\_fra  
koi\_dicco\_fra\_err

koi\_dicco\_fdec  
koi\_dicco\_fdec\_err  
koi\_dicco\_fsky  
koi\_dicco\_fsky\_err  
koi\_dikco\_mra  
koi\_dikco\_mra\_err  
koi\_dikco\_mdec  
koi\_dikco\_mdec\_err  
koi\_dikco\_msky  
koi\_dikco\_msky\_err  
koi\_dikco\_fra  
koi\_dikco\_fra\_err  
koi\_dikco\_fdec  
koi\_dikco\_fdec\_err  
koi\_dikco\_fsky  
koi\_ror\_min  
koi\_ror\_max  
root  
l-- rowid: integer (nullable = true)  
l-- koi\_period: double (nullable = true)  
l-- koi\_period\_err1: double (nullable = true)  
l-- koi\_period\_err2: double (nullable = true)  
l-- koi\_time0bk: double (nullable = true)  
l-- koi\_time0bk\_err1: double (nullable = true)  
l-- koi\_time0bk\_err2: double (nullable = true)  
l-- koi\_time0: double (nullable = true)  
l-- koi\_time0\_err1: double (nullable = true)  
l-- koi\_time0\_err2: double (nullable = true)  
l-- koi\_eccen: integer (nullable = true)  
l-- koi\_impact: double (nullable = true)  
l-- koi\_impact\_err1: double (nullable = true)  
l-- koi\_impact\_err2: double (nullable = true)  
l-- koi\_duration: double (nullable = true)  
l-- koi\_duration\_err1: double (nullable = true)  
l-- koi\_duration\_err2: double (nullable = true)  
l-- koi\_depth: double (nullable = true)  
l-- koi\_depth\_err1: double (nullable = true)  
l-- koi\_depth\_err2: double (nullable = true)  
l-- koi\_ror: double (nullable = true)  
l-- koi\_ror\_err1: double (nullable = true)  
l-- koi\_ror\_err2: double (nullable = true)  
l-- koi\_srho: double (nullable = true)  
l-- koi\_srho\_err1: double (nullable = true)  
l-- koi\_srho\_err2: double (nullable = true)  
l-- koi\_prad: double (nullable = true)  
l-- koi\_prad\_err1: double (nullable = true)  
l-- koi\_prad\_err2: double (nullable = true)  
l-- koi\_sma: double (nullable = true)  
l-- koi\_incl: double (nullable = true)

l-- koi\_teq: double (nullable = true)  
l-- koi\_insol: double (nullable = true)  
l-- koi\_insol\_err1: double (nullable = true)  
l-- koi\_insol\_err2: double (nullable = true)  
l-- koi\_dor: double (nullable = true)  
l-- koi\_dor\_err1: double (nullable = true)  
l-- koi\_dor\_err2: double (nullable = true)  
l-- koi\_ldm\_coeff4: double (nullable = true)  
l-- koi\_ldm\_coeff3: double (nullable = true)  
l-- koi\_ldm\_coeff2: double (nullable = true)  
l-- koi\_ldm\_coeff1: double (nullable = true)  
l-- koi\_max\_sngl\_ev: double (nullable = true)  
l-- koi\_max\_mult\_ev: double (nullable = true)  
l-- koi\_model\_snr: double (nullable = true)  
l-- koi\_count: integer (nullable = true)  
l-- koi\_num\_transits: integer (nullable = true)  
l-- koi\_tce\_plnt\_num: integer (nullable = true)  
l-- koi\_quarters: decimal(32,0) (nullable = true)  
l-- koi\_steff: double (nullable = true)  
l-- koi\_steff\_err1: double (nullable = true)  
l-- koi\_steff\_err2: double (nullable = true)  
l-- koi\_slogg: double (nullable = true)  
l-- koi\_slogg\_err1: double (nullable = true)  
l-- koi\_slogg\_err2: double (nullable = true)  
l-- koi\_smet: double (nullable = true)  
l-- koi\_smet\_err1: double (nullable = true)  
l-- koi\_smet\_err2: double (nullable = true)  
l-- koi\_srad: double (nullable = true)  
l-- koi\_srad\_err1: double (nullable = true)  
l-- koi\_srad\_err2: double (nullable = true)  
l-- koi\_smass: double (nullable = true)  
l-- koi\_smass\_err1: double (nullable = true)  
l-- koi\_smass\_err2: double (nullable = true)  
l-- ra: double (nullable = true)  
l-- dec: double (nullable = true)  
l-- koi\_kepmag: double (nullable = true)  
l-- koi\_gmag: double (nullable = true)  
l-- koi\_rmag: double (nullable = true)  
l-- koi\_imag: double (nullable = true)  
l-- koi\_zmag: double (nullable = true)  
l-- koi\_jmag: double (nullable = true)  
l-- koi\_hmag: double (nullable = true)  
l-- koi\_kmag: double (nullable = true)  
l-- koi\_fwm\_stat\_sig: double (nullable = true)  
l-- koi\_fwm\_sra: double (nullable = true)  
l-- koi\_fwm\_sra\_err: double (nullable = true)  
l-- koi\_fwm\_sdec: double (nullable = true)  
l-- koi\_fwm\_sdec\_err: double (nullable = true)  
l-- koi\_fwm\_srao: double (nullable = true)

```

l-- koi_fwm_srao_err: double (nullable = true)
l-- koi_fwm_sdeco: double (nullable = true)
l-- koi_fwm_sdeco_err: double (nullable = true)
l-- koi_fwm_prao: double (nullable = true)
l-- koi_fwm_prao_err: double (nullable = true)
l-- koi_fwm_pdeco: double (nullable = true)
l-- koi_fwm_pdeco_err: double (nullable = true)
l-- koi_dicco_mra: double (nullable = true)
l-- koi_dicco_mra_err: double (nullable = true)
l-- koi_dicco_mdec: double (nullable = true)
l-- koi_dicco_mdec_err: double (nullable = true)
l-- koi_dicco_msky: double (nullable = true)
l-- koi_dicco_msky_err: double (nullable = true)
l-- koi_dicco_fra: double (nullable = true)
l-- koi_dicco_fra_err: double (nullable = true)
l-- koi_dicco_fdec: double (nullable = true)
l-- koi_dicco_fdec_err: double (nullable = true)
l-- koi_dicco_fsky: double (nullable = true)
l-- koi_dicco_fsky_err: double (nullable = true)
l-- koi_dikco_mra: double (nullable = true)
l-- koi_dikco_mra_err: double (nullable = true)
l-- koi_dikco_mdec: double (nullable = true)
l-- koi_dikco_mdec_err: double (nullable = true)
l-- koi_dikco_msky: double (nullable = true)
l-- koi_dikco_msky_err: double (nullable = true)
l-- koi_dikco_fra: double (nullable = true)
l-- koi_dikco_fra_err: double (nullable = true)
l-- koi_dikco_fdec: double (nullable = true)
l-- koi_dikco_fdec_err: double (nullable = true)
l-- koi_dikco_fsky: double (nullable = true)
l-- koi_disposition: string (nullable = true)
l-- koi_ror_min: double (nullable = true)
l-- koi_ror_max: double (nullable = true)

```

(nombre de ligne : ,6410)

(nombre de colonnes : ,114)

(nombre de ligne : ,6410)

(nombre de colonnes : ,2)

root

```

l-- koi_disposition: string (nullable = true)
l-- features: vector (nullable = true)

```

+-----+-----+

lkoi\_dispositionl featuresl

+-----+-----+

```

l   CONFIRMEDI[9.48803146,2.95E...l
l   CONFIRMEDI[54.418464,2.686E...l
l   CONFIRMEDI[2.525593315,3.66...l
l   CONFIRMEDI[11.09431923,2.13...l

```

```

|   CONFIRMEDI[4.13443005,1.061...|
|   CONFIRMEDI[2.56659092,1.598...|
| FALSE POSITIVE[7.36178044,1.589...|
|   CONFIRMEDI[16.06862959,1.16...|
|   CONFIRMEDI[2.470613385,1.9E...|
|   CONFIRMEDI[2.204735365,3.8E...|
|   CONFIRMEDI[3.522498573,1.94...|
|   CONFIRMEDI[3.709213846,6.32...|
| FALSE POSITIVE[11.521446107,2.0...|
| FALSE POSITIVE[19.40398222,1.39...|
| FALSE POSITIVE[16.46983563,1.20...|
|   CONFIRMEDI[9.27358194,1.178...|
|   CONFIRMEDI[6.029301321,5.36...|
| FALSE POSITIVE[2.696365214,7.04...|
|   CONFIRMEDI[5.34955671,9.141...|
|   CONFIRMEDI[3.94104632,1.16E...|

```

```
+-----+-----+
```

only showing top 20 rows

root

```
|-- koi_disposition: string (nullable = true)
```

```
|-- features: vector (nullable = true)
```

```
|-- label: double (nullable = true)
```

```
+-----+-----+-----+
```

```
|koi_disposition|      features|label|
```

```
+-----+-----+-----+
```

```

|   CONFIRMEDI[9.48803146,2.95E...| 1.0|
|   CONFIRMEDI[54.418464,2.686E...| 1.0|
|   CONFIRMEDI[2.525593315,3.66...| 1.0|
|   CONFIRMEDI[11.09431923,2.13...| 1.0|
|   CONFIRMEDI[4.13443005,1.061...| 1.0|
|   CONFIRMEDI[2.56659092,1.598...| 1.0|
| FALSE POSITIVE[7.36178044,1.589...| 0.0|
|   CONFIRMEDI[16.06862959,1.16...| 1.0|
|   CONFIRMEDI[2.470613385,1.9E...| 1.0|
|   CONFIRMEDI[2.204735365,3.8E...| 1.0|
|   CONFIRMEDI[3.522498573,1.94...| 1.0|
|   CONFIRMEDI[3.709213846,6.32...| 1.0|
| FALSE POSITIVE[11.521446107,2.0...| 0.0|
| FALSE POSITIVE[19.40398222,1.39...| 0.0|
| FALSE POSITIVE[16.46983563,1.20...| 0.0|
|   CONFIRMEDI[9.27358194,1.178...| 1.0|
|   CONFIRMEDI[6.029301321,5.36...| 1.0|
| FALSE POSITIVE[2.696365214,7.04...| 0.0|
|   CONFIRMEDI[5.34955671,9.141...| 1.0|
|   CONFIRMEDI[3.94104632,1.16E...| 1.0|

```

```
+-----+-----+-----+
```

only showing top 20 rows

```

root
|-- koi_disposition: string (nullable = true)
|-- features: vector (nullable = true)
|-- label: double (nullable = true)

```

```

+-----+-----+-----+
|koi_disposition|      features|label|
+-----+-----+-----+
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,1,2,3,4,5...| 1.0|
|   CONFIRMED|([111,[0,3,6,13,44...| 1.0|
|   CONFIRMED|[0.538354308,6.75...| 1.0|
|   CONFIRMED|[0.539915238,1.35...| 1.0|
|   CONFIRMED|[0.567857136,4.44...| 1.0|
|   CONFIRMED|[0.568874427,6.01...| 1.0|
+-----+-----+-----+

```

only showing top 20 rows

```

[D@3c62be3c16/11/16 16:51:53 WARN BLAS: Failed to load implementation from:
com.github.fommil.netlib.NativeSystemBLAS
16/11/16 16:51:53 WARN BLAS: Failed to load implementation from:
com.github.fommil.netlib.NativeRefBLAS
16/11/16 16:52:13 WARN LogisticRegression: LogisticRegression training finished
but the result is not converged because: max iterations reached

```

```

+-----+-----+-----+
|      features|label|prediction|
+-----+-----+-----+
|([111,[0,3,6,13,41...| 1.0|    0.0|
|[0.634002937,1.20...| 1.0|    1.0|
|[0.675649486,2.55...| 1.0|    0.0|
|[0.837491331,2.72...| 1.0|    1.0|
|[0.84338011,8.21E...| 1.0|    1.0|
|[0.927859821,5.49...| 1.0|    1.0|
|[1.005207007,5.09...| 1.0|    1.0|
|[1.118549717,3.12...| 1.0|    1.0|

```



I[1.287076762,1.19...]	1.0I	1.0I
I[1.311555568,5.54...]	1.0I	1.0I
I[1.538188437,6.86...]	1.0I	0.0I
I[1.653893465,4.02...]	1.0I	1.0I
I[1.720861324,6.3E...]	1.0I	0.0I
I[1.732345491,3.28...]	1.0I	1.0I
I[1.916944254,6.11...]	1.0I	1.0I
I[1.921437396,2.12...]	1.0I	1.0I
I[1.954524342,3.30...]	1.0I	1.0I
I[1.973760926,9.7E...]	1.0I	0.0I
I[2.00541269,1.065...]	1.0I	1.0I
I[2.03387914,1.415...]	1.0I	1.0I

+-----+-----+

only showing top 20 rows

ROC BinaryClassificationEvaluator : 0.9450498949579832