

Resultant execution SPARK TP4 :

```
./spark-submit --driver-memory 3G --executor-memory 4G --class  
com.sparkProject.JobML --master spark://dhcpwifi-22-75.enst.fr:7077 /Users/  
stephanetrublereau/Documents/tp_spark/target/scala-2.11/tp_spark-assembly-1.0.jar
```

Fin résultat execution :

16/11/14 18:12:00 WARN BLAS: Failed to load implementation from:
com.github.fommil.netlib.NativeRefBLAS

16/11/14 18:13:49 WARN LogisticRegression: LogisticRegression training finished
but the result is not converged because: max iterations reached

16/11/14 18:14:03 WARN LogisticRegression: LogisticRegression training finished
but the result is not converged because: max iterations reached

16/11/14 18:15:37 WARN LogisticRegression: LogisticRegression training finished
but the result is not converged because: max iterations reached

```
+-----+-----+  
|      features|label|prediction|  
+-----+-----+  
|[0.567857136,4.44...| 1.0|    1.0|  
|[0.677375164,1.24...| 1.0|    0.0|  
|[0.689967832,4.95...| 1.0|    1.0|  
|[0.740928422,1.85...| 1.0|    0.0|  
|[0.742958836,6.3E...| 1.0|    1.0|  
|[0.849907889,2.92...| 1.0|    1.0|  
|[0.916140768,1.91...| 1.0|    1.0|  
|[0.93875077,1.163...| 1.0|    1.0|  
|[1.19655156,3.563...| 1.0|    1.0|  
|[1.224866322,3.83...| 1.0|    1.0|  
|[1.269090374,1.00...| 1.0|    1.0|  
|[1.475322314,4.18...| 1.0|    1.0|  
|[1.6255222,1.55E-...| 1.0|    1.0|  
|[1.766789062,7.12...| 1.0|    1.0|  
|[2.052349905,1.5E...| 1.0|    0.0|  
|[2.09081565,1.034...| 1.0|    1.0|  
|[2.104722184,9.17...| 1.0|    1.0|  
|[2.164570968,6.83...| 1.0|    1.0|  
|[2.240486391,4.04...| 1.0|    1.0|  
|[2.403643296,7.22...| 1.0|    1.0|  
+-----+-----+
```

only showing top 20 rows

ROC BinaryClassificationEvaluator : 0.9940126902342445

Détail complet du CR produit

16/11/14 18:11:51 WARN NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable

16/11/14 18:11:51 WARN Utils: Service 'SparkUI' could not bind on port 4040. Attempting port 4041.

16/11/14 18:11:52 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.

16/11/14 18:11:55 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_sngl_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_sngle_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)
```

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

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

only showing top 20 rows

root

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

```
+-----+-----+-----+
|koi_disposition|      features|label|
+-----+-----+-----+
|   CONFIRMED|9.48803146,2.95E...| 1.0|
|   CONFIRMED|54.418464,2.686E...| 1.0|
|   CONFIRMED|2.525593315,3.66...| 1.0|
|   CONFIRMED|11.09431923,2.13...| 1.0|
|   CONFIRMED|4.13443005,1.061...| 1.0|
|   CONFIRMED|2.56659092,1.598...| 1.0|
| FALSE POSITIVE|7.36178044,1.589...| 0.0|
|   CONFIRMED|16.06862959,1.16...| 1.0|
|   CONFIRMED|2.470613385,1.9E...| 1.0|
|   CONFIRMED|2.204735365,3.8E...| 1.0|
|   CONFIRMED|3.522498573,1.94...| 1.0|
|   CONFIRMED|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|
|   CONFIRMED|[9.27358194,1.178...| 1.0|
|   CONFIRMED|[6.029301321,5.36...| 1.0|
| FALSE POSITIVE|[2.696365214,7.04...| 0.0|
|   CONFIRMED|[5.34955671,9.141...| 1.0|
|   CONFIRMED|[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,[0,3,6,13,41...| 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|[0.568874427,6.01...| 1.0|

```

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

only showing top 20 rows

```

[D@1d654b5f16/11/14 18:12:00 WARN BLAS: Failed to load implementation from:
com.github.fommil.netlib.NativeSystemBLAS
16/11/14 18:12:00 WARN BLAS: Failed to load implementation from:
com.github.fommil.netlib.NativeRefBLAS
16/11/14 18:13:49 WARN LogisticRegression: LogisticRegression training finished
but the result is not converged because: max iterations reached
16/11/14 18:14:03 WARN LogisticRegression: LogisticRegression training finished

```


but the result is not converged because: max iterations reached
16/11/14 18:15:37 WARN LogisticRegression: LogisticRegression training finished
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```
+-----+-----+
|          features|label|prediction|
+-----+-----+
|[0.567857136,4.44...| 1.0|    1.0|
|[0.677375164,1.24...| 1.0|    0.0|
|[0.689967832,4.95...| 1.0|    1.0|
|[0.740928422,1.85...| 1.0|    0.0|
|[0.742958836,6.3E...| 1.0|    1.0|
|[0.849907889,2.92...| 1.0|    1.0|
|[0.916140768,1.91...| 1.0|    1.0|
|[0.93875077,1.163...| 1.0|    1.0|
|[1.19655156,3.563...| 1.0|    1.0|
|[1.224866322,3.83...| 1.0|    1.0|
|[1.269090374,1.00...| 1.0|    1.0|
|[1.475322314,4.18...| 1.0|    1.0|
|[1.6255222,1.55E-...| 1.0|    1.0|
|[1.766789062,7.12...| 1.0|    1.0|
|[2.052349905,1.5E...| 1.0|    0.0|
|[2.09081565,1.034...| 1.0|    1.0|
|[2.104722184,9.17...| 1.0|    1.0|
|[2.164570968,6.83...| 1.0|    1.0|
|[2.240486391,4.04...| 1.0|    1.0|
|[2.403643296,7.22...| 1.0|    1.0|
```

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

ROC BinaryClassificationEvaluator : 0.9940126902342445