TECNOLÓGICO NACIONAL DE MÉXICO

INSTITUTO TECNOLÓGICO DE TIJUANA

SUBDIRECCIÓN ACADÉMICA

DEPARTAMENTO DE SISTEMAS Y COMPUTACIÓN

NOMBRE DE LOS ALUMNOS:

GALAVIZ LONA OSCAR EDUARDO (N.CONTROL: 17212993)

MARQUEZ MILLAN SEASHELL VANESSA (N.CONTROL:)

Carrera: Ingeniería Informática

Semestre: 9no

MATERIA: Datos Masivos

PROFESOR: JOSE CHRISTIAN ROMERO HERNANDEZ

Practice 5

Unidad 2

Development

Well the firt thing is load the library in this case need two

```
import org.apache.spark.ml.classification.MultilayerPerceptronClassifier
import org.apache.spark.ml.evaluation.MulticlassClassificationEvaluator
```

Load the dataframe it's so important too for we can work with te data

```
val data = spark.read.format("libsvm").load("SampleLivs.txt")
```

Now need define the variables than we go to need and these variables are for split the data into train and test

```
val splits = data.randomSplit(Array(0.6, 0.4), seed = 1503L)
val train = splits(0)
val test = splits(1)
```

This is a very important part because here specify layers for the neural network, first nput layer, two intermediate and the last number is output

```
val layers = Array[Int](4, 5, 4, 3)
```

```
val trainer = new
MultilayerPerceptronClassifier().setLayers(layers).setBlockSize(130).setSee
d(1503L).setMaxIter(100)
```

Here is were train the model ```scala val model = trainer.fit(train) ```
Here we need to compute accuracy on the test set

```
val result = model.transform(test)
val predictLabels = result.select("prediction", "label")
```

```
val eval = new
MulticlassClassificationEvaluator().setMetricName("accuracy")
```

And this is the finish only print the results

```
println(s"Test set accuracy = ${evaluator.evaluate(predictionAndLabels)}")
```