Artemis Maddox

INFS 6351

Week 7HW: Python Problem

**Resource:**

<https://pythonguides.com/>

<https://pythonguides.com/unexpected-eof-python/>

**Description:**

Python Guides is a good site for beginners, as it has both tutorials and error walkthroughs. The error walkthroughs are especially helpful as I do not yet understand all the terminology used in the manuals, so simply being able to read the documentation for the definition of the error is often not enough for me to fix the issue.

**Problem:**

Because I run my code from the source pane one section at a time while building it, it is easy for me to slip and not select the right or full code. As the resource says, “It \*is\* a good idea to copy/paste code when you can, so that you avoid typos, but you have to pay careful attention as you move chunks of code around.” This is because the code in the console must be run in complete blocks, if the code indicates a next line, such as in “with…. as….”, the next line must exist and be run concurrently or the function is incomplete and thus unable to be performed.

**Demonstration:**

*HW: Machine Learning in Python*

*Error:*

with open("C:/INFS 6351/pima-indians-diabetes.csv","r", newline = '', encoding="utf-8") as f1:

File "<ipython-input-5-f325592a0b6e>", line 1

with open("C:/INFS 6351/pima-indians-diabetes.csv","r", newline = '', encoding="utf-8") as f1:

^

SyntaxError: unexpected EOF while parsing

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Description automatically generated

*View of incorrectly selected source code:*

A screenshot of a computer

Description automatically generated

*Fixed:*

with open("C:/INFS 6351/pima-indians-diabetes.csv","r", newline = '', encoding="utf-8") as f1:

myReader = csv.reader(f1)

for row in myReader:

data.append(row)

A screenshot of a computer

Description automatically generated with medium confidence

*Correct Selection:*

A screenshot of a computer

Description automatically generated with medium confidence

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Week 7HW: R Problem

**Resource:**

<https://stackoverflow.com/>

<https://stackoverflow.com/questions/30002013/error-in-confusion-matrix-the-data-and-reference-factors-must-have-the-same-nu>

**Description:**

StackOverflow is my go-to when encountering an Error Code, as the preserved discussions often solve my issue even when the dataset and use case are different. Most tutorial websites for R are so focused on teaching the right way to code that there is not much way to troubleshoot with them, and if they are relevant likely someone on StackOverflow has already linked the supplementary resource. In this case the given data and problem are slightly different, but the Error is the same, and beyond simply solving my issue I now know how to look into the cause using str() or another description function and fix it upstream.

**Problem:**

When creating a confusion matrix, the two inputs must be comparable - i.e., the same type of data, such as numeric, and the same dimensions (number of rows and columns). If this is not the case, an error will arise. In my case, this meant I had to go back and redo the assignment, as I had been using the wrong part of the datacamp tutorial to partition my data.

**Demonstration:**

*HW: Machine Learning in R:*

*Error:*

> #5

> confusionMatrix(myCars\_pred,myCars.test[,2])

Error: `data` and `reference` should be factors with the same levels.

> #5

> confusionMatrix(myCars\_pred, myCars.test)

Error: `data` and `reference` should be factors with the same levels.

*Problem: The partitioning here is dubious at best, as the as the training and test sets both exclude the predictor variable.*

#2

set.seed(1234)

ind <- sample(2, nrow(myCars), replace = TRUE, prob = c(0.67, 0.33))

myCars.training <- myCars[ind==1, c(1,3:11)]

myCars.test <- myCars[ind==2, c(1,3:11)]

#3

myCars.trainLabels <- myCars[ind==1,2]

myCars.testLabels <- myCars[ind==2,2]

#4

myCars\_pred <- knn(train = myCars.training, test = myCars.test, cl = myCars.trainLabels, k=3)

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application

Description automatically generated

*Fixed:*

#2

index <- createDataPartition(myCars$cyl, p=0.75, list = F)

myCars.training <- myCars[index,]

myCars.test <- myCars[-index,]

#3

model\_cars\_knn <- train(myCars.training[,c(1,3:11)], myCars.training[,2],

method='knn')

#4

predict\_Car <- predict.train(object = model\_cars\_knn,myCars.test[,c(1,3:11)],

type = "raw")

#5

confusionMatrix(predict\_Car,myCars.test[,2])

Text

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Graphical user interface, text, application

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