

## Python! Build a random sample lyr from a Feature Class

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This script is built to be a "script tool" that you fire off from ArcGIS Toolbox. The user points to a feature class and specifies a number of random features to return, and the tool will add a random subset of your data as a .lyr back to ArcMap. I'll be using this for quality control.

```
# Name: createRandomSampleLyr.py
# Author: Kevin Bell SLC UT DOT
# Date: 20080822
# Purpose: this is an ArcToolbox tool to build a random subset of
#          a feature class, the user determines the sample size
```

```
"""-----
right click a toolbox and hit add new script, name it and
point to this file on disk. Once it shows up in the toolbox,
right click the new script tool and hit Properties.
Fill in the following parameters

Toolbox parameters:
Display Name      Data Type      Type      Direction  Multivalue

Feature Class to Sample  Feature Class  Required  input      no
Sample Size            String         Required  input      no
outLyr                 Layer         Derived   output     no
-----"""
```

```
import sys, os, random
import arcgisscripting

gp = arcgisscripting.create(9.3)
gp.overwriteoutput = 1

fc = gp.GetParameterAsText(0)
sampleSize = int(gp.GetParameterAsText(1))
gp.workspace = os.path.dirname(fc)

fname = os.path.splitext(os.path.basename(fc))
fname = fname[0]

dsc = gp.describe(fc)
rows = gp.SearchCursor(fc)
row = rows.Next()
l = []
oidField = dsc.OIDFieldName
while row:
    if oidField == "OBJECTID":
        l.append(row.OBJECTID)
        row = rows.Next()
    elif oidField == "FID":
        l.append(row.FID)
        row = rows.Next()

#get a "random" sample and reformat as whereclause
sample = random.sample(l, sampleSize)
s = str(sample)
s = s.replace("[", "(")
s = s.replace("]", ")")
whereclause = oidField + " IN " + s
```

print whereclause

```
subsetLyrName = "subsetOf_" + fcname + ".lyr"  
subsetLyr = "subsetOf_" + fcname
```

```
gp.MakeFeatureLayer_management (fc, subsetLyr, whereclause)  
gp.SaveToLayerFile_management (subsetLyr, subsetLyrName)
```

```
print "made a subset of " + str(sampleSize) + " features from " + fc  
print "your new subset lyr is in " + str(gp.workspace)  
gp.AddMessage("\n made a subset of " + str(sampleSize) + " features from " + fc + "\n")  
gp.AddMessage("your new subset lyr is in " + str(gp.workspace) + "\n")
```

```
gp.SetParameterAsText(2, subsetLyrName)
```