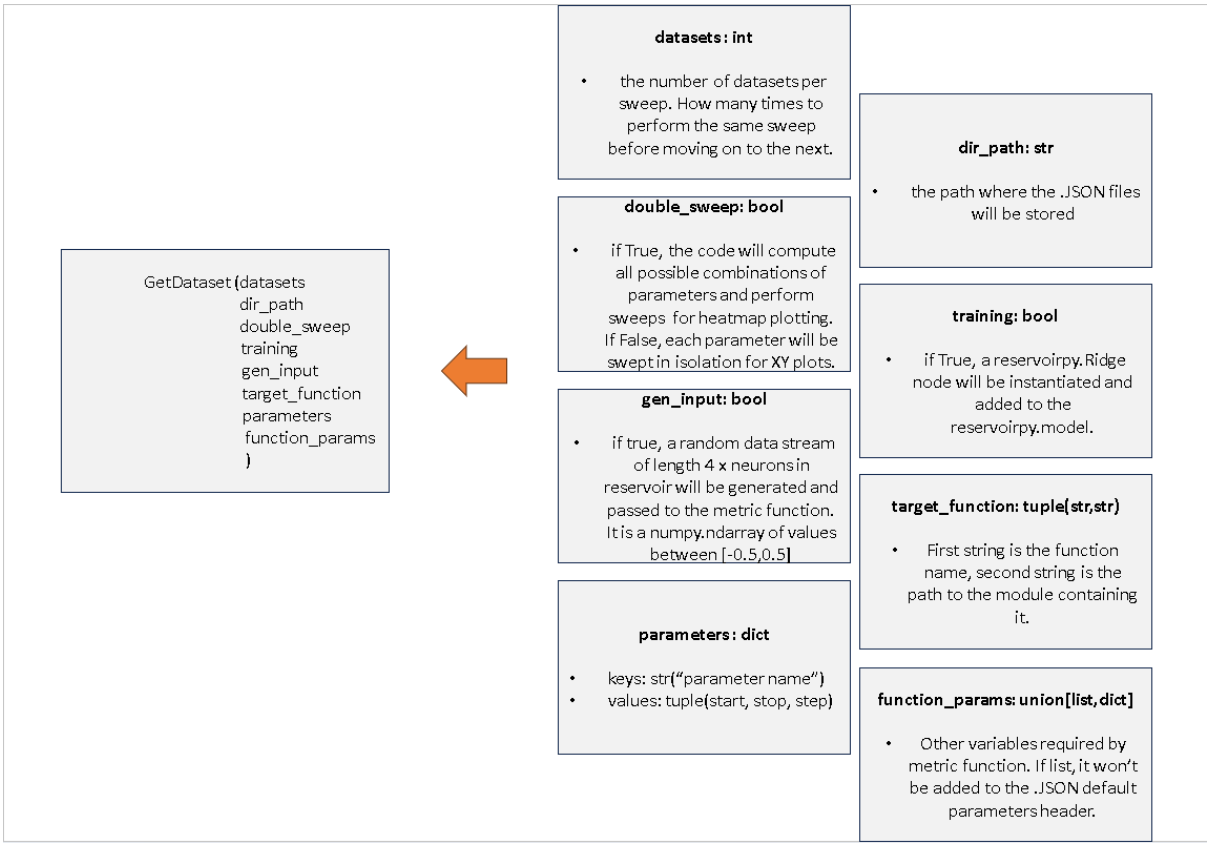
GenDataset_V7 User Manual

Input variables



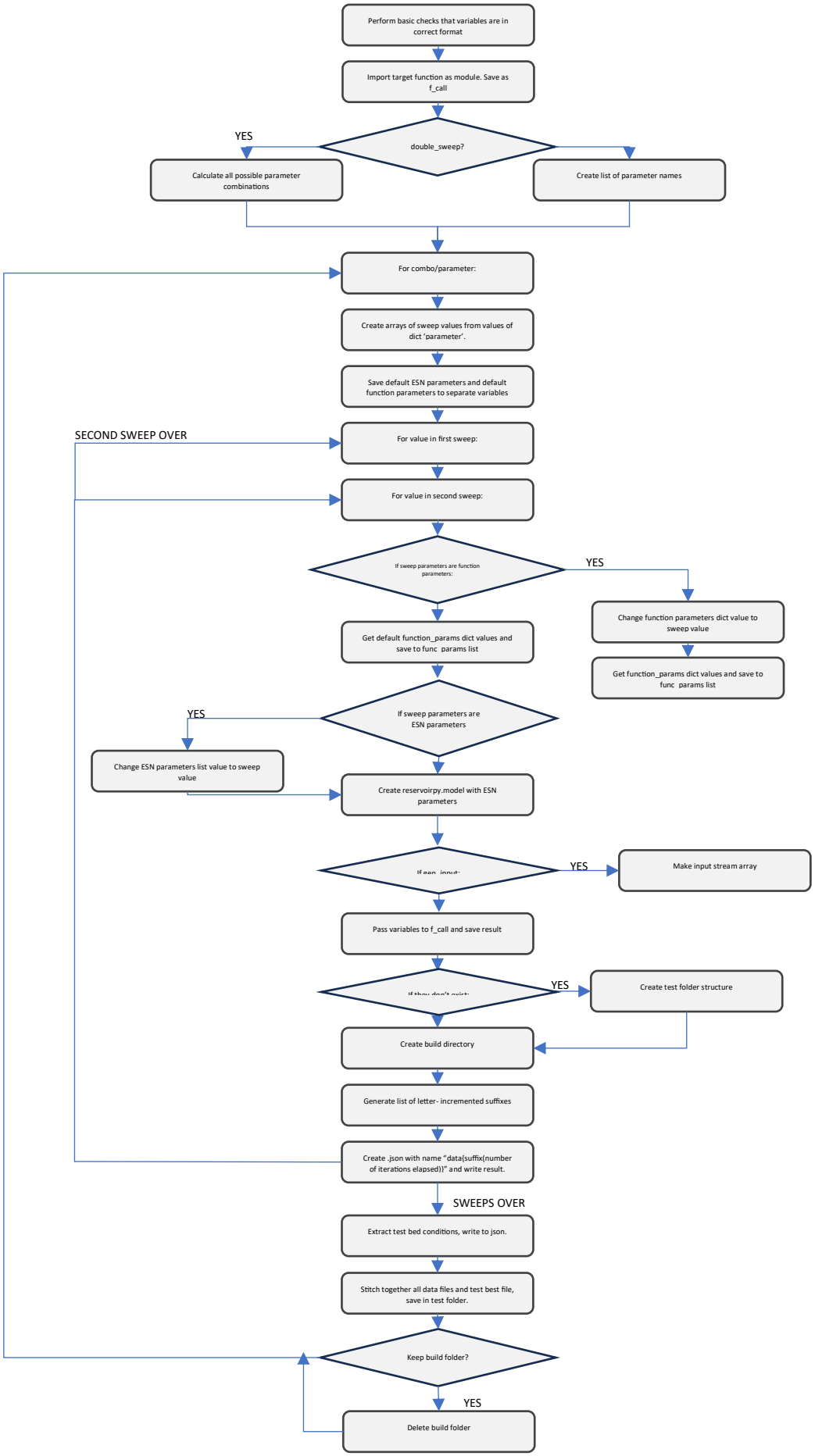
Example call for a double sweep of 4 parameters, for calculating the row Shannon Entropy.

```
#-----------------------------------TEST-----------------------------------#

datasets = 2
directory_path = 'C:\\Users\matte\Desktop\\test_suite\\'
target = ('Shannon_Entropy','C:\\Users\matte\\Desktop\RC_py\Code\Metrics\shannon_entropy\shannon_entropy_V15.py')
params = {
          "Leak rate"     : (0.05,1,0.05),
          "connectivity"  : (0.05,1,0.05),
          "history length": (2,5,1),
          "bucket count"  : (5,15,1)
         }
function_params = {
                   "columnwise"     : False,
                   "history length" : 2,
                   "bucket count"   : 10
                  }

GetDataset(datasets=datasets,
           dir_path=directory_path,
           double_sweep=True,
           training=False,
           gen_input=True,
           target_function=target,
           parameters=params,
           function_params=function_params
           )
```

Logic flowchart



Notes and suggestions

- For ESN parameters, the spelling has to be exactly the same as those hard coded in the script. These are:
    - “node count”
    - “leak rate”
    - “spectral radius”
    - “connectivity”
    - “input scaling”
    - “input connectivity”

- You can sweep parameters as well as pass them to f_call, so long as you make sure you have spelled them the same in both parameters and function_params. ONLY specify sweep-bounds tuple in parameters, pass default in function_params.

- Single parameter sweeps are untested, and there is currently no script for plotting them.

- passing a list of reservoirpy.models to GenDataset instead of having them generated is possible, however this feature is untested.

- Preliminary variable format/value checks are not exhaustive.