```
import random
import sys
import time
from os import system

# Selection Sort - Descending Order
def sel_sort(n_list):
	for i in range(len(n_list)-1,0,-1):
		pos= i
		for j in range(i):
			if n_list[j] > n_list[pos]: pos= j
		if pos!=i:
			n_list[i], n_list[pos] = n_list[pos], n_list[i]

# Testbed Size
n=int(sys.argv[1])

# Create an array of random input sizes
# based on Commandline Argument
n=int(sys.argv[1])
input_size=(random.sample(range(10,n*10), n))
input_size.sort()

# open a file to store data
plot_file = open("plot_data.txt", "w")

# Start Analysis by capturing the time required
for i in input_size:
	# construct a array of random numbers based on input size
	arr=random.sample(range(100,n*1000,100), i)

	start=time.time()	# Capture Start time
	sel_sort(arr)		# Execute the code
	end=time.time()		# Capture End time

	# Write to file for processing in GNUPLOT
	plot_file.write(str(i)+" "+str(end-start)+" "+str(i*i)+"\n")

# Close the File
plot_file.close()
# Plot Data is ready !!!

# Set up the gnuplot script file
# set X-axis and y-axis labels and title of the graph
# Plot curves from file
# save graph in form of .png

gnuplot_script = '''
set xlabel "Input Size"
set ylabel "Time Taken (seconds)"
set title "Time Efficiency of Selection Sort"
plot "plot_data.txt" u 1:2 w lp pt 1 title 'Actual Time', '' u 1:3 w lp pt 1 title
'Estimated Time'
set term png
set output "sort_efficiency.png"
replot
'''

#write the script to the file
```

```
with open('plot.gnu', 'w') as file:
    file.write(gnuplot_script)

#execute the script
system('gnuplot -persist plot.gnu')
```