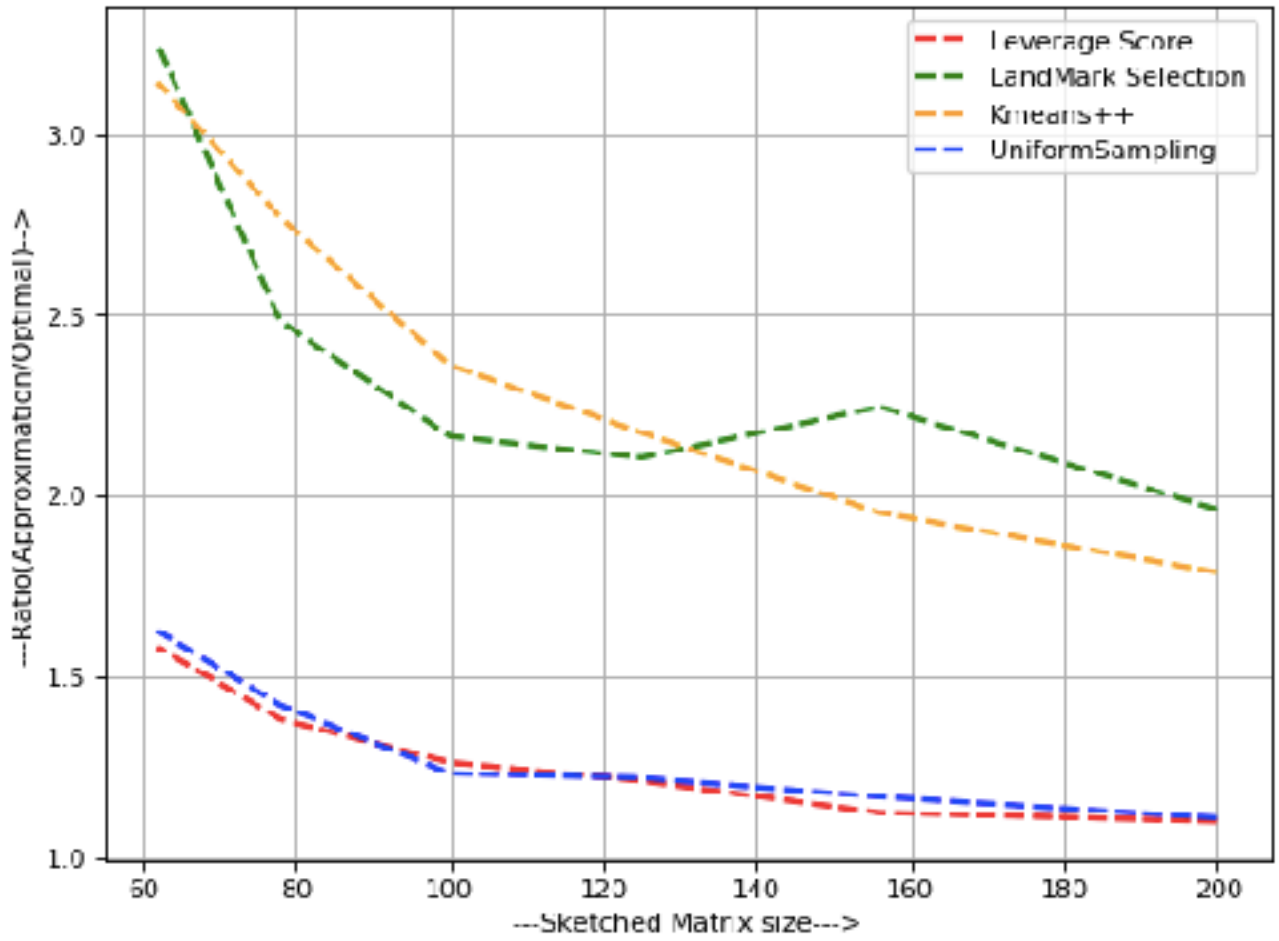
```
Enter the column dimension (# fo row): 5000
Enter the row dimension(# of column > 20): 35
```

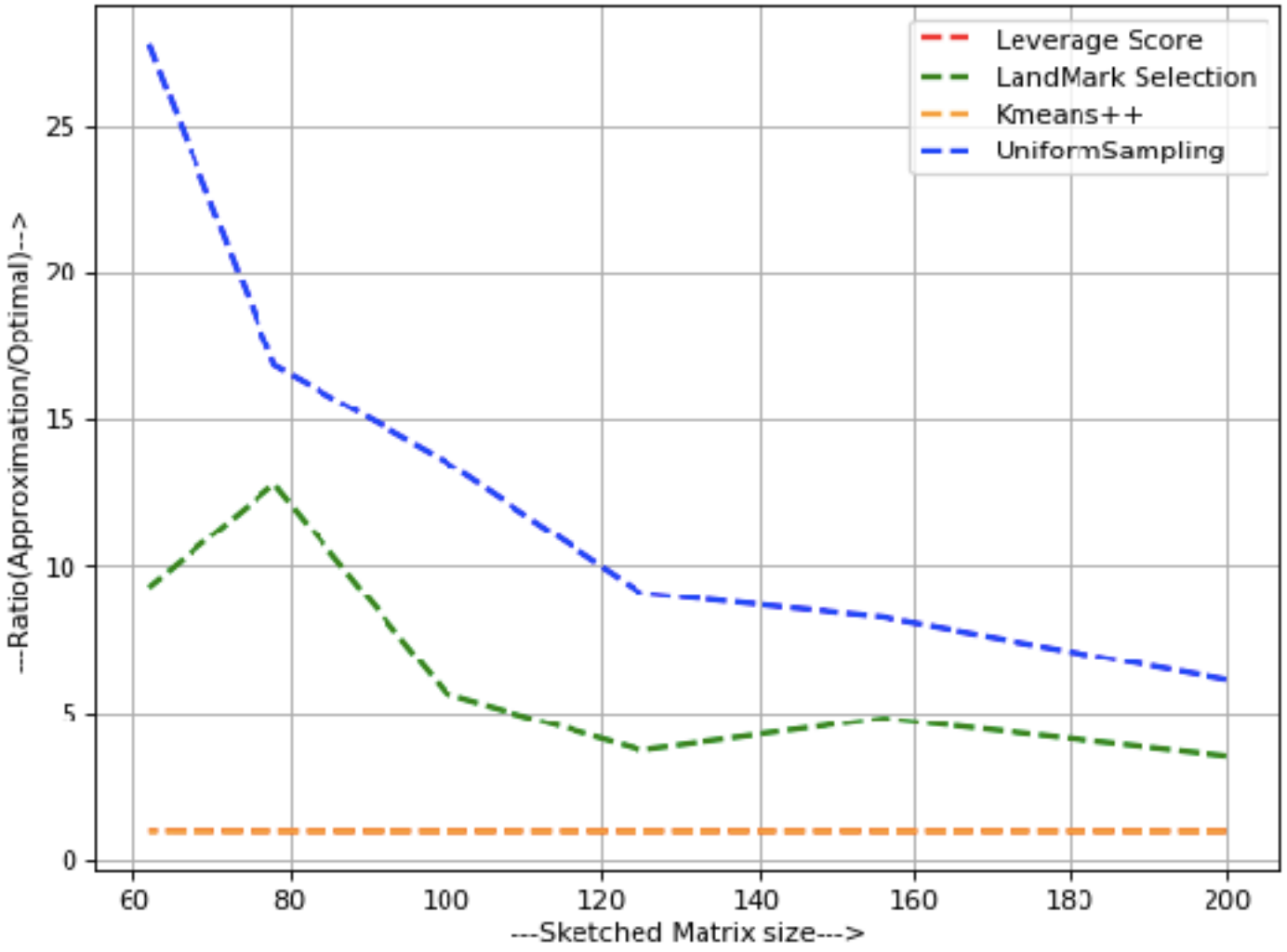
Nearly Uniform Leverage Score

```
A,b = GA(n,d)
x_opt = regression(A,b)
l2normOpt = np.linalg.norm((A.dot(x_opt)-b),ord=2)
execute(A,b)
```



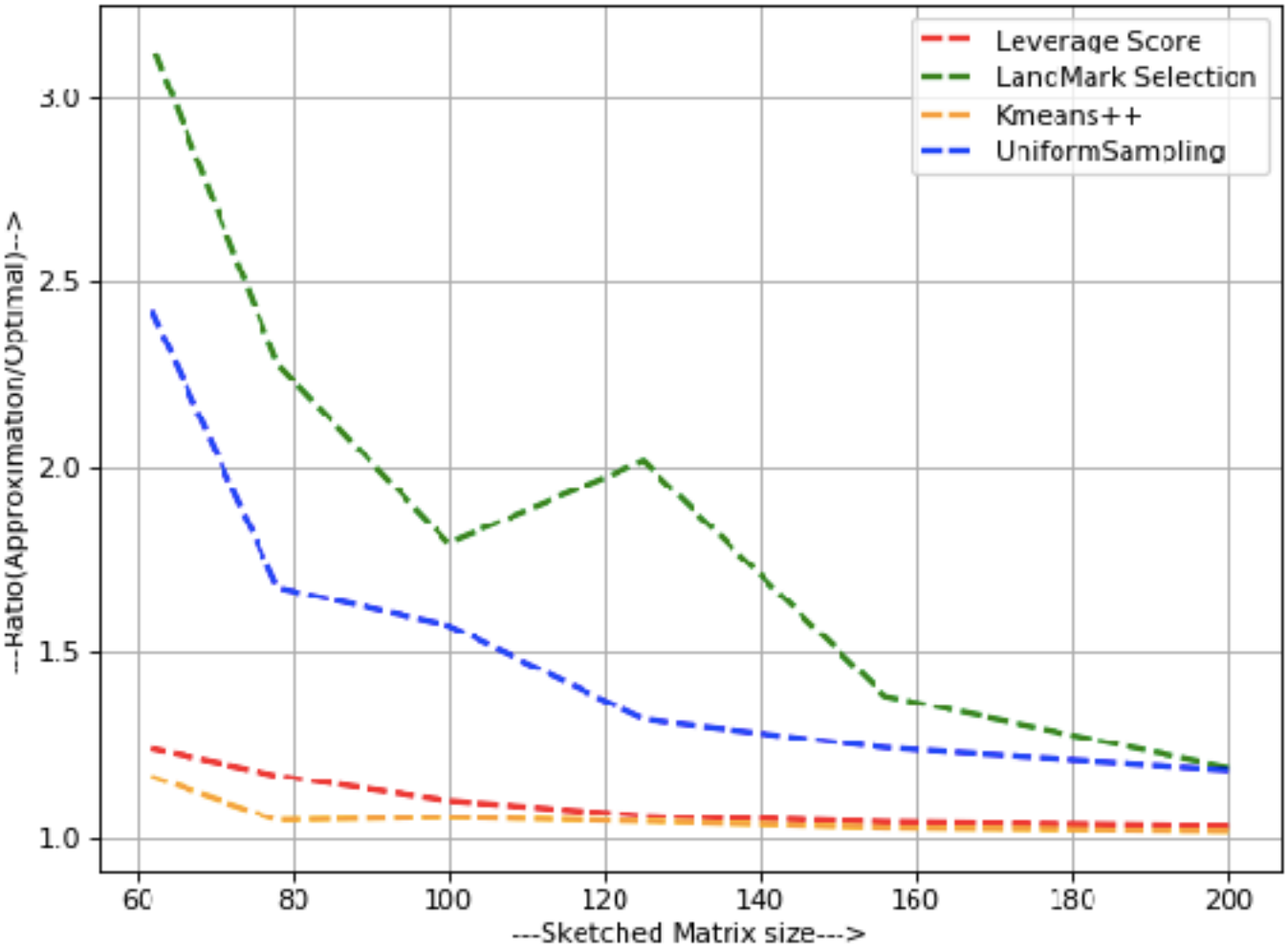
Execution : Very Non-Uniform Leverage Score

```
A,b=T1(n,d)
x_opt = regression(A,b)
l2normOpt = np.linalg.norm((A.dot(x_opt)-b),ord=2)
execute(A,b)
```



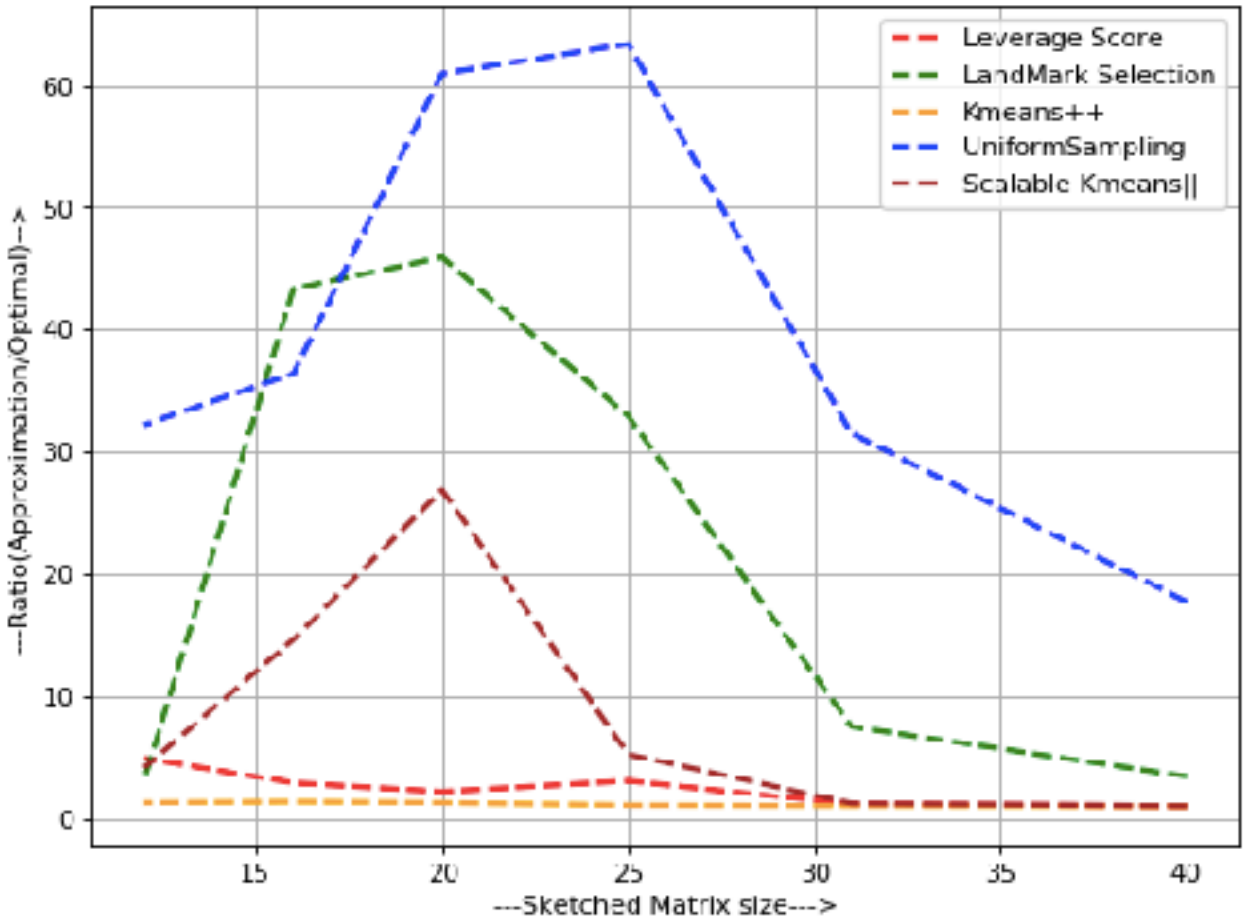
Execution : Moderaltely Uniform Leverage Score

```
A,b = f3(n,d)
x_opt = regression(A,b)
l2normOpt = np.linalg.norm((A.dot(x_opt)-b),ord=2)
execute(A,b)
```



Above Implementation along with Kmeans || :
N = 1000
D = 21
Data is for Very Non-Uniform Leverage score (T1)

```
A,b = T1(n,d)
x_opt = regression(A,b)
l2normOpt = np.linalg.norm((A.dot(x_opt)-b),ord=2)
execute(A,b)
```



N = 2000
D = 21
Same data as Above

```
A,b = T1(n,d)
x_opt = regression(A,b)
l2normOpt = np.linalg.norm((A.dot(x_opt)-b),ord=2)
execute(A,b)
```