

## Executing the sparse grid density estimation utility:

```
python main.py --mode density --data <path_to_datafile> --level <required_grid_level> --lambda  
<regularization_constant> --regstr <regularization_strategy> --alphath <co-efficient_threshold>
```

Parameters	Type/Options	Description
mode	string (density)	
data	string	path to datafile
level	integer	required grid level
lambda	float (default = 0.01)	regularization constant
regstr	string (default = laplace, identity)	regularization strategy
alphath	float (default = 0.25)	co-efficient threshold
imax	integer (default = no. of grid points)	Max number of iterations in co-efficient estimation
classify	boolean (default = False)	Classify the data

Example:

```
python main.py --mode density --data data/toy2.txt --level 6 --lambda 0.2 --regstr 'identity'
```

```
python main.py --mode density --data data/ripleyGarcke.train.arff.gz --level 5 --lambda 0.1 --classify  
--alphath 0.1
```