The first level of the json should have the "type" and "models" attributes. The "type" should be either "regression" or "classification" depending on the task. Inside the "models" attribute you write the models and parameters you want to try. Each model should have a "name" and a "parameters" attribute. The value used in "name" should be the same used by scikit-learn. In the parameters attributes each parameters should have the name assigned by scikit-learn. It is not necessary to define every parameter for the model here, those parameters that are not defined are going to be set as default by scikit-learn. This example shows a JSON file for a regression task using a ridge regression.

```
{
	"type" : "regression",
	"comment" : "In the 'name' section use the same name as scikit-learn",
	"comment" : "Use the same parameters name as scikit-learn",
	"models" : [
		{
			"name" : "Ridge",
			"parameters" : [
				{
					"fit_intercept" : ["True"],
					"alpha" : [0.75,0.8,0.85,0.9]
				}
			]
		}
}
```

If you want to use another set of hyperparameter you can write it on the same "parameters" attribute. For instance:

```
{
	"type" : "regression",
	"comment" : "In the 'name' section use the same name as scikit-learn",
	"comment" : "Use the same parameters name as scikit-learn",
	"models" : [
		{
			"name" : "Ridge",
			"parameters" : [
				{
					"fit_intercept" : ["True"],
					"alpha" : [0.75, 0.8, 0.85, 0.9]
				},
				{
					"alpha" : [0.001, 0.002, 0.0003]
				}
			]
		}
}
```

If you want to add another model, it should be included inside the "models" list. For example, if we want to have Ridge and Lasso it will look like this.

```
{
        "type" : "regression",
        "comment" : "In the 'name' section use the same name as scikit-learn",
        "comment" : "Use the same parameters name as scikit-learn",
        "models" : [
                {
                        "name" : "Ridge",
                        "parameters" : [
                                {
                                        "fit_intercept" : ["True"],
                                        "alpha" : [0.75, 0.8, 0.85, 0.9]
                                },
                                {
                                        "alpha" : [0.001, 0.002, 0.0003]
                                }
                        ]
                }
                {
                        "name" : "Lasso"
                        "parameters" : [
                                {
                                        "alpha": [0.03,0.06,0.09],
                                        "tol":   [0.02,0.04,0.06,0.08]
                                }
                        ]
                }
    ]
}
```

An example for classification looks like this:

```
{
	"type" : "classification",
	"models" : [
		{
			"name" : "RandomForestClassifier",
			"parameters" : [
				{
					"max_depth" : [5,6,7,8],
					"min_samples_split" : [3,4,5],
					"n_estimators" :[100],
					"class_weight" : ["balanced"]
				}
			]
		},
		{
			"name" : "SVC",
			"parameters" : [
				{
					"C" : [1e-2,1e-1,1],
					"kernel": ["linear"]
				},

				{
					"C": [1e-2,1e-1,1],
					"gamma": [1e-4, 1e-3, 1e-2, 1e-1],
					"kernel": ["rbf"]
				}
			]
		},
		{
			"comment" : "Tuples must be passed as strings because is not a valid type in a json",
			"name" : "MLPClassifier",
			"parameters" : [
				{
					"hidden_layer_sizes": ["(50,)"],
					"learning_rate_init": [1e-9, 1e-6, 1e-3],
					"max_iter": [500, 1000, 2000]
				}
			]
		},
	]
}
```

Note that in the Support Vector Classifier (SVC) we should use two sets of hyperparameters because it uses different kernels which require different parameters.

It is important to know that some parameters require a special notation, such as booleans (look at the parameter fit_intercept in ridge regression) and tuples (look at the parameter hidden_layer_sizes in MLPClassifier). These data types require a special notation because JSON files do no recognize them.