1). FreeSolv Dataset without path info:

num_layers: 1
small_hidden_dim: 161
dropout: 0.4168274325534108
weight_decay: 1.635806233409211e-10
batch_size: 4
lr: 0.05900224481337009

2). FreeSolv Dataset with path info:

num_layers: 1
small_hidden_dim: 12
max_pow: 2
dropout: 0.14449349878813347
weight_decay: 1.386048955624208e-11
batch_size: 3
lr: 0.06246465272211292

3). ESOL Dataset without path info:

num_layers: 1
small_hidden_dim: 138
dropout: 0.10740849252745631
weight_decay: 5.829522761945421e-07
batch_size: 5
lr: 0.00899803546663418

4). ESOL Dataset with path info:

num_layers: 2
small_hidden_dim: 59
max_pow: 5
dropout: 0.4428927705250062
weight_decay: 6.117308833591867e-17
batch_size: 6
lr: 0.003446531385382952

5). Lipophilicity Dataset without path info:

num_layers: 2
small_hidden_dim: 93
dropout: 0.477217941047075
weight_decay: 6.236350503288137e-05
batch_size: 8
lr: 0.0006731898598905812

6). Lipophilicity Dataset with path info:

num_layers: 2
small_hidden_dim: 148
max_pow: 4
dropout: 0.7090744972020606
weight_decay: 7.552208510172316e-16
batch_size: 9
lr: 4.4670389174200005e-05

7). BACE Dataset without path info:

num_layers: 8
small_hidden_dim: 163
dropout: 0.030429863104662863
 weight_decay: 4.963667106698153e-19
batch_size: 10
lr: 0.00014261807046744095

8). BACE Dataset with path info:

num_layers: 7
small_hidden_dim: 137
max_pow: 3
dropout: 0.14579599577455854
 weight_decay: 1.8976159247030544e-11
 batch_size: 10
 lr: 2.256250669202958e-05

9). BBBP Dataset without path info:

```
num_layers: 2
small_hidden_dim: 122
dropout: 0.05535406119748653
weight_decay: 1.1527288629473404e-14
batch_size: 6
lr: 0.00041876458799519465
```

10). BBBP Dataset with path info:

```
num_layers: 1
small_hidden_dim: 70
max_pow: 3
dropout: 0.19975030896092166
weight_decay: 2.037326704901844e-15
batch_size: 9
lr: 0.0014197707178220946
```

11). ClinTox Dataset without path info:

```
num_layers: 10
small_hidden_dim: 95
dropout: 0.45924929530332814
weight_decay: 3.9844666148289284e-20
batch_size: 6
lr: 0.04057762972479995
```

12). ClinTox Dataset with path info:

```
num_layers: 9
small_hidden_dim: 164
max_pow: 4
dropout: 0.4778545342903914
weight_decay: 0.003608476532411314
batch_size: 6
lr: 4.199957904366677e-05
```

13). Example Usage:

```
python train_mix_hop.py  --use_gpu 1 --dataset ClinTox /
--repitition 3      --epochs 200 /
--use_path_info 1  --add_noise 1 --noise_factor 0.1 /
```

```
--num-layers 9     --small_hidden_dim 164       --max_pow 4 /
 --dropout 0.48 --weight_decay 0.003608476532411314  --batch-size 6 /
--lr 4.199957904366677e-05 --dir_to_save_model /path/to/mix_hop_models
```