

File - GNN

```
1 PyTorch has version 1.12.1+cu113
2 ['home/shaoze/PycharmProjects/CS244w/lab2']
3 ENZYMES dataset has 6 classes and 3 features
4 Graph with index 100 has label tensor([4])
5 Graph with index 200 has 53.0 edges
6 Device: cpu
7 Epoch: 01, Loss: 3.9697, Train: 24.03%, Valid: 27.94% Test: 25.11%
8 Epoch: 02, Loss: 2.3592, Train: 22.78%, Valid: 21.36% Test: 26.86%
9 Epoch: 03, Loss: 1.9603, Train: 36.23%, Valid: 33.33% Test: 37.56%
10 Epoch: 04, Loss: 1.7788, Train: 36.52%, Valid: 26.98% Test: 24.98%
11 Epoch: 05, Loss: 1.6772, Train: 36.74%, Valid: 27.77% Test: 27.68%
12 Epoch: 06, Loss: 1.5763, Train: 33.67%, Valid: 20.21% Test: 18.17%
13 Epoch: 07, Loss: 1.5134, Train: 29.98%, Valid: 20.35% Test: 20.83%
14 Epoch: 08, Loss: 1.4538, Train: 28.09%, Valid: 22.11% Test: 25.77%
15 Epoch: 09, Loss: 1.4019, Train: 27.73%, Valid: 22.57% Test: 27.29%
16 Epoch: 10, Loss: 1.3710, Train: 27.53%, Valid: 23.40% Test: 28.52%
17 Epoch: 11, Loss: 1.3526, Train: 27.64%, Valid: 24.40% Test: 29.65%
18 Epoch: 12, Loss: 1.3256, Train: 28.84%, Valid: 26.19% Test: 31.73%
19 Epoch: 13, Loss: 1.3002, Train: 31.81%, Valid: 28.79% Test: 34.41%
20 Epoch: 14, Loss: 1.2773, Train: 36.65%, Valid: 33.96% Test: 39.67%
21 Epoch: 15, Loss: 1.2593, Train: 42.89%, Valid: 42.50% Test: 48.19%
22 Epoch: 16, Loss: 1.2416, Train: 49.61%, Valid: 51.28% Test: 55.49%
23 Epoch: 17, Loss: 1.2294, Train: 54.57%, Valid: 57.29% Test: 59.70%
24 Epoch: 18, Loss: 1.2116, Train: 57.33%, Valid: 60.24% Test: 61.82%
25 Epoch: 19, Loss: 1.1978, Train: 58.55%, Valid: 60.66% Test: 62.48%
26 Epoch: 20, Loss: 1.1858, Train: 58.83%, Valid: 60.21% Test: 62.43%
27 Epoch: 21, Loss: 1.1746, Train: 59.08%, Valid: 59.73% Test: 62.29%
28 Epoch: 22, Loss: 1.1641, Train: 59.72%, Valid: 59.53% Test: 62.30%
29 Epoch: 23, Loss: 1.1542, Train: 60.24%, Valid: 59.92% Test: 62.52%
30 Epoch: 24, Loss: 1.1461, Train: 60.85%, Valid: 60.55% Test: 62.64%
31 Epoch: 25, Loss: 1.1370, Train: 61.10%, Valid: 60.76% Test: 62.81%
32 Epoch: 26, Loss: 1.1278, Train: 61.38%, Valid: 60.67% Test: 63.03%
33 Epoch: 27, Loss: 1.1236, Train: 62.22%, Valid: 61.71% Test: 63.85%
34 Epoch: 28, Loss: 1.1124, Train: 63.95%, Valid: 63.91% Test: 65.44%
35 Epoch: 29, Loss: 1.1074, Train: 65.44%, Valid: 65.75% Test: 66.47%
36 Epoch: 30, Loss: 1.1002, Train: 66.27%, Valid: 66.76% Test: 66.94%
37 Epoch: 31, Loss: 1.0940, Train: 66.93%, Valid: 67.18% Test: 67.34%
38 Epoch: 32, Loss: 1.0866, Train: 67.38%, Valid: 67.47% Test: 67.82%
39 Epoch: 33, Loss: 1.0830, Train: 67.76%, Valid: 67.73% Test: 68.09%
40 Epoch: 34, Loss: 1.0752, Train: 68.00%, Valid: 67.68% Test: 68.27%
41 Epoch: 35, Loss: 1.0674, Train: 68.34%, Valid: 68.13% Test: 68.50%
42 Epoch: 36, Loss: 1.0669, Train: 68.53%, Valid: 68.41% Test: 68.54%
43 Epoch: 37, Loss: 1.0622, Train: 68.57%, Valid: 68.41% Test: 68.27%
44 Epoch: 38, Loss: 1.0568, Train: 68.48%, Valid: 68.03% Test: 67.93%
45 Epoch: 39, Loss: 1.0510, Train: 68.65%, Valid: 67.77% Test: 67.95%
46 Epoch: 40, Loss: 1.0483, Train: 68.90%, Valid: 67.96% Test: 68.26%
47 Epoch: 41, Loss: 1.0420, Train: 69.28%, Valid: 68.42% Test: 68.68%
48 Epoch: 42, Loss: 1.0375, Train: 69.56%, Valid: 69.11% Test: 69.08%
49 Epoch: 43, Loss: 1.0343, Train: 69.87%, Valid: 69.48% Test: 69.21%
50 Epoch: 44, Loss: 1.0317, Train: 70.06%, Valid: 69.85% Test: 69.32%
51 Epoch: 45, Loss: 1.0292, Train: 70.20%, Valid: 69.91% Test: 69.67%
52 Epoch: 46, Loss: 1.0248, Train: 70.36%, Valid: 70.07% Test: 69.72%
53 Epoch: 47, Loss: 1.0182, Train: 70.67%, Valid: 70.14% Test: 69.52%
54 Epoch: 48, Loss: 1.0187, Train: 70.77%, Valid: 70.09% Test: 69.03%
55 Epoch: 49, Loss: 1.0145, Train: 71.00%, Valid: 69.98% Test: 68.70%
56 Epoch: 50, Loss: 1.0093, Train: 71.15%, Valid: 70.02% Test: 68.75%
57 Epoch: 51, Loss: 1.0083, Train: 71.41%, Valid: 70.44% Test: 69.29%
58 Epoch: 52, Loss: 1.0051, Train: 71.50%, Valid: 70.68% Test: 69.74%
59 Epoch: 53, Loss: 1.0008, Train: 71.57%, Valid: 70.61% Test: 69.78%
60 Epoch: 54, Loss: 1.0026, Train: 71.64%, Valid: 70.40% Test: 69.34%
61 Epoch: 55, Loss: 0.9982, Train: 71.70%, Valid: 70.57% Test: 69.28%
62 Epoch: 56, Loss: 0.9951, Train: 71.81%, Valid: 70.94% Test: 69.96%
63 Epoch: 57, Loss: 0.9916, Train: 71.79%, Valid: 71.19% Test: 70.48%
64 Epoch: 58, Loss: 0.9895, Train: 71.82%, Valid: 71.12% Test: 70.55%
65 Epoch: 59, Loss: 0.9902, Train: 71.78%, Valid: 70.94% Test: 70.04%
66 Epoch: 60, Loss: 0.9855, Train: 71.80%, Valid: 70.52% Test: 69.26%
67 Epoch: 61, Loss: 0.9855, Train: 71.81%, Valid: 70.35% Test: 69.13%
68 Epoch: 62, Loss: 0.9820, Train: 71.90%, Valid: 70.58% Test: 69.38%
69 Epoch: 63, Loss: 0.9796, Train: 72.01%, Valid: 70.71% Test: 69.66%
70 Epoch: 64, Loss: 0.9755, Train: 72.13%, Valid: 70.67% Test: 69.67%
71 Epoch: 65, Loss: 0.9730, Train: 72.13%, Valid: 70.67% Test: 69.46%
```

File - GNN

72 Epoch: 66, Loss: 0.9717, Train: 72.20%, Valid: 70.71% Test: 69.57%
73 Epoch: 67, Loss: 0.9678, Train: 72.23%, Valid: 70.91% Test: 69.80%
74 Epoch: 68, Loss: 0.9677, Train: 72.35%, Valid: 70.97% Test: 69.63%
75 Epoch: 69, Loss: 0.9670, Train: 72.34%, Valid: 71.00% Test: 69.24%
76 Epoch: 70, Loss: 0.9641, Train: 72.41%, Valid: 70.82% Test: 69.05%
77 Epoch: 71, Loss: 0.9577, Train: 72.47%, Valid: 70.81% Test: 69.16%
78 Epoch: 72, Loss: 0.9614, Train: 72.40%, Valid: 71.00% Test: 69.64%
79 Epoch: 73, Loss: 0.9553, Train: 72.40%, Valid: 70.94% Test: 69.89%
80 Epoch: 74, Loss: 0.9569, Train: 72.62%, Valid: 71.16% Test: 70.09%
81 Epoch: 75, Loss: 0.9537, Train: 72.69%, Valid: 71.00% Test: 69.58%
82 Epoch: 76, Loss: 0.9523, Train: 72.75%, Valid: 70.83% Test: 69.12%
83 Epoch: 77, Loss: 0.9508, Train: 72.74%, Valid: 70.88% Test: 69.67%
84 Epoch: 78, Loss: 0.9473, Train: 72.75%, Valid: 70.77% Test: 69.66%
85 Epoch: 79, Loss: 0.9453, Train: 72.75%, Valid: 70.52% Test: 69.10%
86 Epoch: 80, Loss: 0.9461, Train: 72.82%, Valid: 70.49% Test: 68.87%
87 Epoch: 81, Loss: 0.9429, Train: 72.81%, Valid: 71.00% Test: 69.69%
88 Epoch: 82, Loss: 0.9421, Train: 72.80%, Valid: 71.33% Test: 70.66%
89 Epoch: 83, Loss: 0.9407, Train: 73.01%, Valid: 71.45% Test: 70.64%
90 Epoch: 84, Loss: 0.9369, Train: 72.96%, Valid: 70.51% Test: 68.57%
91 Epoch: 85, Loss: 0.9367, Train: 72.78%, Valid: 70.43% Test: 68.51%
92 Epoch: 86, Loss: 0.9355, Train: 72.95%, Valid: 71.10% Test: 69.76%
93 Epoch: 87, Loss: 0.9325, Train: 73.10%, Valid: 71.39% Test: 70.52%
94 Epoch: 88, Loss: 0.9329, Train: 73.34%, Valid: 71.56% Test: 70.61%
95 Epoch: 89, Loss: 0.9308, Train: 73.42%, Valid: 71.26% Test: 69.94%
96 Epoch: 90, Loss: 0.9281, Train: 73.51%, Valid: 71.26% Test: 69.80%
97 Epoch: 91, Loss: 0.9292, Train: 73.39%, Valid: 71.40% Test: 70.41%
98 Epoch: 92, Loss: 0.9253, Train: 73.31%, Valid: 71.06% Test: 69.80%
99 Epoch: 93, Loss: 0.9226, Train: 73.42%, Valid: 71.09% Test: 69.53%
100 Epoch: 94, Loss: 0.9232, Train: 73.55%, Valid: 71.84% Test: 70.57%
101 Epoch: 95, Loss: 0.9230, Train: 73.50%, Valid: 71.78% Test: 70.73%
102 Epoch: 96, Loss: 0.9177, Train: 73.53%, Valid: 71.59% Test: 70.52%
103 Epoch: 97, Loss: 0.9169, Train: 73.66%, Valid: 71.55% Test: 70.36%
104 Epoch: 98, Loss: 0.9174, Train: 73.69%, Valid: 71.61% Test: 70.41%
105 Epoch: 99, Loss: 0.9170, Train: 73.58%, Valid: 71.18% Test: 69.82%
106 Epoch: 100, Loss: 0.9147, Train: 73.58%, Valid: 71.35% Test: 70.04%
107
108 Process finished with exit code 0
109