## vroom@deeplearning-1-vm:~/code\$ python train GAMENet.py parameters 452434 Train--Epoch: 0, Step: 4232/4233, L p cnt: 5044, L neg cnt: 5431 Eval--Epoch: 0, Step: 1058/1059 DDI Rate: 0.0996, Jaccard: 0.3579, PRAUC: 0.6155, AVG PRC: 0.6268, AVG RECALL: 0.4702, AVG F1: 0.5186 Epoch: 0, Loss: 0.1254, One Epoch Time: 1.90m, Appro Left Time: 1.24h path saved/GAMENet/Epoch 0 JA 0.3579 DDI 0.0996.model Train--Epoch: 1, Step: 4232/4233, L\_p cnt: 5032, L\_neg cnt: 5443 Eval--Epoch: 1, Step: 1058/1059 DDI Rate: 0.0411, Jaccard: 0.3606, PRAUC: 0.6270, AVG PRC: 0.6421, AVG RECALL: 0.4662, AVG F1: 0.5217 Epoch: 1, Loss: 0.1203, One Epoch Time: 1.86m, Appro Left Time: 1.18h path saved/GAMENet/Epoch 1 JA 0.3606 DDI 0.0411.model Train--Epoch: 2, Step: 4232/4233, L p cnt: 6752, L neg cnt: 3723 Eval--Epoch: 2, Step: 1058/1059 DDI Rate: 0.0503, Jaccard: 0.3732, PRAUC: 0.6380, AVG PRC: 0.6502, AVG RECALL: 0.4800, AVG F1: 0.5348 Epoch: 2, Loss: 0.1580, One Epoch Time: 1.85m, Appro Left Time: 1.14h path saved/GAMENet/Epoch 2 JA 0.3732 DDI 0.0503.model Train--Epoch: 3, Step: 4232/4233, L p cnt: 6589, L neg cnt: 3886 Eval--Epoch: 3, Step: 1058/1059 DDI Rate: 0.0469, Jaccard: 0.3920, PRAUC: 0.6474, AVG PRC: 0.6435, AVG RECALL: 0.5087, AVG F1: 0.5510 Epoch: 3, Loss: 0.1437, One Epoch Time: 1.85m, Appro Left Time: 1.11h path saved/GAMENet/Epoch 3 JA 0.3920 DDI 0.0469.model Train--Epoch: 4, Step: 4232/4233, L\_p cnt: 6209, L\_neg cnt: 4266 Eval--Epoch: 4, Step: 1058/1059 DDI Rate: 0.0557, Jaccard: 0.4050, PRAUC: 0.6601, AVG PRC: 0.6422, AVG RECALL: 0.5309, AVG F1: 0.5639 Epoch: 4, Loss: 0.1340, One Epoch Time: 1.84m, Appro Left Time: 1.07h path saved/GAMENet/Epoch 4 JA 0.4050 DDI 0.0557.model

Train--Epoch: 5, Step: 4232/4233, L p cnt: 5772, L neg cnt: 4703

```
Eval--Epoch: 5, Step: 1058/1059 DDI Rate: 0.0539, Jaccard: 0.4099, PRAUC: 0.6664, AVG_PRC: 0.6552, AVG_RECALL: 0.5308, AVG_F1: 0.5693 Epoch: 5, Loss: 0.1226, One Epoch Time: 1.83m, Appro Left Time: 1.04h path___saved/GAMENet/Epoch_5_JA_0.4099_DDI_0.0539.model
```

Train--Epoch: 6, Step: 4232/4233, L\_p cnt: 5968, L\_neg cnt: 4507

Eval--Epoch: 6, Step: 1058/1059 DDI Rate: 0.0633, Jaccard: 0.4144,

PRAUC: 0.6711, AVG\_PRC: 0.6618, AVG\_RECALL: 0.5344, AVG\_F1: 0.5740

Epoch: 6, Loss: 0.1252, One Epoch Time: 1.85m, Appro Left Time: 1.02h

path\_\_\_saved/GAMENet/Epoch\_6\_JA\_0.4144\_DDI\_0.0633.model

Train--Epoch: 7, Step: 4232/4233, L\_p cnt: 6168, L\_neg cnt: 4307

Eval--Epoch: 7, Step: 1058/1059 DDI Rate: 0.0697, Jaccard: 0.4153,

PRAUC: 0.6756, AVG\_PRC: 0.6710, AVG\_RECALL: 0.5301, AVG\_F1: 0.5746

Epoch: 7, Loss: 0.1269, One Epoch Time: 1.84m, Appro Left Time: 0.98h

path\_\_\_saved/GAMENet/Epoch\_7\_JA\_0.4153\_DDI\_0.0697.model

Train--Epoch: 8, Step: 4232/4233, L\_p cnt: 6355, L\_neg cnt: 4120

Eval--Epoch: 8, Step: 1058/1059 DDI Rate: 0.0692, Jaccard: 0.4192,

PRAUC: 0.6789, AVG\_PRC: 0.6721, AVG\_RECALL: 0.5356, AVG\_F1: 0.5784

Epoch: 8, Loss: 0.1289, One Epoch Time: 1.79m, Appro Left Time: 0.93h

path\_\_\_ saved/GAMENet/Epoch\_8\_JA\_0.4192\_DDI\_0.0692.model

Train--Epoch: 9, Step: 4232/4233, L\_p cnt: 6619, L\_neg cnt: 3856

Eval--Epoch: 9, Step: 1058/1059 DDI Rate: 0.0700, Jaccard: 0.4258,

PRAUC: 0.6817, AVG\_PRC: 0.6627, AVG\_RECALL: 0.5525, AVG\_F1: 0.5850

Epoch: 9, Loss: 0.1344, One Epoch Time: 1.80m, Appro Left Time: 0.90h

path\_\_\_ saved/GAMENet/Epoch\_9\_JA\_0.4258\_DDI\_0.0700.model

Train--Epoch: 10, Step: 4232/4233, L\_p cnt: 6878, L\_neg cnt: 3597

Eval--Epoch: 10, Step: 1058/1059 DDI Rate: 0.0727, Jaccard: 0.4287,

PRAUC: 0.6829, AVG\_PRC: 0.6632, AVG\_RECALL: 0.5579, AVG\_F1: 0.5884

Epoch: 10, Loss: 0.1385, One Epoch Time: 1.78m, Appro Left Time: 0.86h

path\_\_\_saved/GAMENet/Epoch\_10\_JA\_0.4287\_DDI\_0.0727.model

Train--Epoch: 11, Step: 4232/4233, L\_p cnt: 7013, L\_neg cnt: 3462

Eval--Epoch: 11, Step: 1058/1059 DDI Rate: 0.0758, Jaccard: 0.4322,

PRAUC: 0.6855, AVG PRC: 0.6582, AVG RECALL: 0.5680, AVG F1: 0.5918

Epoch: 11, Loss: 0.1405, One Epoch Time: 1.81m, Appro Left Time: 0.85h

path\_\_ saved/GAMENet/Epoch\_11\_JA\_0.4322\_DDI\_0.0758.model

Train--Epoch: 12, Step: 4232/4233, L\_p cnt: 7340, L\_neg cnt: 3135

Eval--Epoch: 12, Step: 1058/1059 DDI Rate: 0.0782, Jaccard: 0.4340,

PRAUC: 0.6879, AVG\_PRC: 0.6599, AVG\_RECALL: 0.5702, AVG\_F1: 0.5934

Epoch: 12, Loss: 0.1462, One Epoch Time: 1.80m, Appro Left Time: 0.81h

path saved/GAMENet/Epoch 12 JA 0.4340 DDI 0.0782.model

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While running GAMENet training top command gives:

top - 02:59:02 up 2:28, 2 users, load average: 0.40, 0.17, 0.24

Tasks: 188 total, 15 running, 173 sleeping, 0 stopped, 0 zombie

%Cpu(s): **34.7** us, **2.8** sy, **0.0** ni, **59.0** id, **0.0** wa, **0.0** hi, **3.5** si, **0.0** st

MiB Mem: 26121.7 total, 22585.1 free, 1941.9 used, 1594.7 buff/cache

MiB Swap: **0.0** total, **0.0** free, **0.0** used. **23820.7** avail Me

## python train\_LR.py

DDI Rate: 0.0782, Jaccard: 0.4087, PRAUC: 0.6739, AVG PRC: 0.6730,

AVG\_RECALL: 0.5224, AVG\_F1: 0.5669

avg med 11.370468611847922

python baseline\_near.py

DDI Rate: 0.0791, Jaccard: 0.3911, PRAUC: 0.3805, AVG PRC: 0.5786,

AVG\_RECALL: 0.5705, AVG\_F1: 0.5465

vroom@deeplearning-1-vm:~/code\$ python ./baseline/train\_Retain.py –parameters 289490

Train--Epoch: 0, Step: 4231/4233

Eval--Epoch: 0, Step: 1058/1059 DDI Rate: 0.0757, Jaccard: 0.3197,

PRAUC: 0.5432, AVG PRC: 0.3921, AVG RECALL: 0.6925, AVG F1: 0.4737

avg med 25.935245901639345

Epoch: 0, Loss1: 1.1619, One Epoch Time: 0.55m, Appro Left Time: 0.36h

Train--Epoch: 1, Step: 4231/4233

Eval--Epoch: 1, Step: 1058/1059 DDI Rate: 0.0850, Jaccard: 0.3487,

PRAUC: 0.5956, AVG PRC: 0.4275, AVG RECALL: 0.6939, AVG F1: 0.5068

avg med 23.757377049180327

Epoch: 1, Loss1: 0.6180, One Epoch Time: 0.56m, Appro Left Time: 0.35h

Train--Epoch: 2, Step: 4231/4233

Eval--Epoch: 2, Step: 1058/1059 DDI Rate: 0.0898, Jaccard: 0.3664,

PRAUC: 0.6155, AVG PRC: 0.4540, AVG RECALL: 0.6869, AVG F1: 0.5259

avg med 22.048360655737707

Epoch: 2, Loss1: 0.4937, One Epoch Time: 0.55m, Appro Left Time: 0.34h

Train--Epoch: 3, Step: 4231/4233

Eval--Epoch: 3, Step: 1058/1059 DDI Rate: 0.0873, Jaccard: 0.3791,

PRAUC: 0.6278, AVG\_PRC: 0.4983, AVG\_RECALL: 0.6435, AVG\_F1: 0.5398

avg med 18.81311475409836

Epoch: 3, Loss1: 0.4663, One Epoch Time: 0.55m, Appro Left Time: 0.33h

Train--Epoch: 4, Step: 4231/4233

Eval--Epoch: 4, Step: 1058/1059 DDI Rate: 0.0920, Jaccard: 0.3822,

PRAUC: 0.6320, AVG\_PRC: 0.4932, AVG\_RECALL: 0.6576, AVG\_F1: 0.5429

avg med 19.851639344262296

Epoch: 4, Loss1: 0.4422, One Epoch Time: 0.54m, Appro Left Time: 0.31h

Train--Epoch: 5, Step: 4231/4233

Eval--Epoch: 5, Step: 1058/1059 DDI Rate: 0.0929, Jaccard: 0.3870,

PRAUC: 0.6350, AVG PRC: 0.5100, AVG RECALL: 0.6441, AVG F1: 0.5482

avg med 18.55163934426<u>2295</u>

Epoch: 5, Loss1: 0.4403, One Epoch Time: 0.54m, Appro Left Time: 0.31h

Train--Epoch: 6, Step: 4231/4233

Eval--Epoch: 6, Step: 1058/1059 DDI Rate: 0.0894, Jaccard: 0.3920,

PRAUC: 0.6401, AVG PRC: 0.5164, AVG RECALL: 0.6454, AVG F1: 0.5533

avg med 18.518852459016394

Epoch: 6, Loss1: 0.4144, One Epoch Time: 0.54m, Appro Left Time: 0.30h

Train--Epoch: 7, Step: 4231/4233

Eval--Epoch: 7, Step: 1058/1059 DDI Rate: 0.0892, Jaccard: 0.3949,

PRAUC: 0.6433, AVG PRC: 0.5355, AVG RECALL: 0.6259, AVG F1: 0.5567

avg med 16.975409836065573

Epoch: 7, Loss1: 0.4053, One Epoch Time: 0.55m, Appro Left Time: 0.29h

Train--Epoch: 8, Step: 4231/4233

Eval--Epoch: 8, Step: 1058/1059 DDI Rate: 0.0869, Jaccard: 0.3970,

PRAUC: 0.6452, AVG\_PRC: 0.5427, AVG\_RECALL: 0.6207, AVG\_F1: 0.5588

avg med 16.60655737704918

Epoch: 8, Loss1: 0.4052, One Epoch Time: 0.55m, Appro Left Time: 0.28h

Train--Epoch: 9, Step: 4231/4233

Eval--Epoch: 9, Step: 1058/1059 DDI Rate: 0.0853, Jaccard: 0.3994,

PRAUC: 0.6474, AVG\_PRC: 0.5404, AVG\_RECALL: 0.6285, AVG\_F1: 0.5611

avg med 17.02622950819672

Epoch: 9, Loss1: 0.3985, One Epoch Time: 0.54m, Appro Left Time: 0.27h

Train--Epoch: 10, Step: 4231/4233

Eval--Epoch: 10, Step: 1058/1059 DDI Rate: 0.0862, Jaccard: 0.4006,

PRAUC: 0.6481, AVG\_PRC: 0.5494, AVG\_RECALL: 0.6193, AVG\_F1: 0.5624

avg med 16.42377049180328

Epoch: 10, Loss1: 0.3940, One Epoch Time: 0.54m, Appro Left Time:

0.26h

Train--Epoch: 11, Step: 4231/4233

Eval--Epoch: 11, Step: 1058/1059 DDI Rate: 0.0863, Jaccard: 0.4017,

PRAUC: 0.6498, AVG PRC: 0.5444, AVG RECALL: 0.6266, AVG F1: 0.5633

avg med 16.818852459016394

Epoch: 11, Loss1: 0.3878, One Epoch Time: 0.54m, Appro Left Time:

0.25h

Train--Epoch: 12, Step: 4231/4233

Eval--Epoch: 12, Step: 1058/1059 DDI Rate: 0.0866, Jaccard: 0.4027,

PRAUC: 0.6491, AVG PRC: 0.5370, AVG RECALL: 0.6412, AVG F1: 0.5642

avg med 18.254918032786886

Epoch: 12, Loss1: 0.3889, One Epoch Time: 0.55m, Appro Left Time:

0.25h

Train--Epoch: 13, Step: 4231/4233

Eval--Epoch: 13, Step: 1058/1059 DDI Rate: 0.0856, Jaccard: 0.4045,

PRAUC: 0.6502, AVG PRC: 0.5426, AVG RECALL: 0.6372, AVG F1: 0.5662

avg med 17.624590163934425

Epoch: 13, Loss1: 0.3874, One Epoch Time: 0.54m, Appro Left Time:

0.23h

Train--Epoch: 14, Step: 4231/4233

Eval--Epoch: 14, Step: 1058/1059 DDI Rate: 0.0812, Jaccard: 0.4053,

PRAUC: 0.6524, AVG\_PRC: 0.5718, AVG\_RECALL: 0.6046, AVG\_F1: 0.5676

avg med 15.134426229508197

Epoch: 14, Loss1: 0.3824, One Epoch Time: 0.53m, Appro Left Time:

0.22h

Train--Epoch: 15, Step: 4231/4233

Eval--Epoch: 15, Step: 1058/1059 DDI Rate: 0.0853, Jaccard: 0.4053,

PRAUC: 0.6526, AVG\_PRC: 0.5648, AVG\_RECALL: 0.6110, AVG\_F1: 0.5670

avg med 15.645081967213114

Epoch: 15, Loss1: 0.3808, One Epoch Time: 0.53m, Appro Left Time:

0.21h

Train--Epoch: 16, Step: 4231/4233

Eval--Epoch: 16, Step: 1058/1059 DDI Rate: 0.0872, Jaccard: 0.4079,

PRAUC: 0.6530, AVG PRC: 0.5443, AVG RECALL: 0.6418, AVG F1: 0.5693

avg med 17.49344262295082

Epoch: 16, Loss1: 0.3811, One Epoch Time: 0.53m, Appro Left Time:

0.20h

Train--Epoch: 17, Step: 4231/4233

Eval--Epoch: 17, Step: 1058/1059 DDI Rate: 0.0885, Jaccard: 0.4081,

PRAUC: 0.6537, AVG\_PRC: 0.5479, AVG\_RECALL: 0.6376, AVG\_F1: 0.5697

avg med 17.31639344262295

Epoch: 17, Loss1: 0.3762, One Epoch Time: 0.53m, Appro Left Time:

0.19h

Train--Epoch: 18, Step: 4231/4233

Eval--Epoch: 18, Step: 1058/1059 DDI Rate: 0.0775, Jaccard: 0.4065,

PRAUC: 0.6560, AVG PRC: 0.5899, AVG RECALL: 0.5860, AVG F1: 0.5686

avg med 14.1

Epoch: 18, Loss1: 0.3775, One Epoch Time: 0.53m, Appro Left Time:

0.19h

Train--Epoch: 19, Step: 4231/4233

Eval--Epoch: 19, Step: 1058/1059 DDI Rate: 0.0878, Jaccard: 0.4087,

PRAUC: 0.6559, AVG\_PRC: 0.5509, AVG\_RECALL: 0.6341, AVG\_F1: 0.5702

avg med 17.233606557377048

Epoch: 19, Loss1: 0.3760, One Epoch Time: 0.53m, Appro Left Time:

0.18h

Train--Epoch: 20, Step: 4231/4233

Eval--Epoch: 20, Step: 1058/1059 DDI Rate: 0.0883, Jaccard: 0.4094,

PRAUC: 0.6561, AVG\_PRC: 0.5633, AVG\_RECALL: 0.6198, AVG\_F1: 0.5711

avg med 16.151639344262296

Epoch: 20, Loss1: 0.3842, One Epoch Time: 0.54m, Appro Left Time:

0.17h

Train--Epoch: 21, Step: 4231/4233

Eval--Epoch: 21, Step: 1058/1059 DDI Rate: 0.0882, Jaccard: 0.4104,

PRAUC: 0.6574, AVG PRC: 0.5735, AVG RECALL: 0.6117, AVG F1: 0.5724

avg med 15.461475409836066

Epoch: 21, Loss1: 0.3727, One Epoch Time: 0.53m, Appro Left Time:

0.16h

Train--Epoch: 22, Step: 4231/4233

Eval--Epoch: 22, Step: 1058/1059 DDI Rate: 0.0890, Jaccard: 0.4120,

PRAUC: 0.6568, AVG PRC: 0.5507, AVG RECALL: 0.6425, AVG F1: 0.5735

avg med 17.45327868852459

Epoch: 22, Loss1: 0.3809, One Epoch Time: 0.53m, Appro Left Time:

0.15h

Train--Epoch: 23, Step: 4231/4233

Eval--Epoch: 23, Step: 1058/1059 DDI Rate: 0.0877, Jaccard: 0.4125,

PRAUC: 0.6571, AVG PRC: 0.5649, AVG RECALL: 0.6251, AVG F1: 0.5742

avg med 16.368852459016395

Epoch: 23, Loss1: 0.3711, One Epoch Time: 0.53m, Appro Left Time:

0.14h

Train--Epoch: 24, Step: 4231/4233

Eval--Epoch: 24, Step: 1058/1059 DDI Rate: 0.0876, Jaccard: 0.4136,

PRAUC: 0.6572, AVG\_PRC: 0.5414, AVG\_RECALL: 0.6583, AVG\_F1: 0.5749

avg med 18.389344262295083

Epoch: 24, Loss1: 0.3692, One Epoch Time: 0.53m, Appro Left Time:

0.13h

Train--Epoch: 25, Step: 4231/4233

Eval--Epoch: 25, Step: 1058/1059 DDI Rate: 0.0853, Jaccard: 0.4135,

PRAUC: 0.6582, AVG\_PRC: 0.5692, AVG\_RECALL: 0.6229, AVG\_F1: 0.5753

avg med 15.948360655737705

Epoch: 25, Loss1: 0.3671, One Epoch Time: 0.53m, Appro Left Time:

0.12h

Train--Epoch: 26, Step: 4231/4233

Eval--Epoch: 26, Step: 1058/1059 DDI Rate: 0.0837, Jaccard: 0.4138,

PRAUC: 0.6591, AVG PRC: 0.5666, AVG RECALL: 0.6258, AVG F1: 0.5754

avg med 16.057377049180328

Epoch: 26, Loss1: 0.3686, One Epoch Time: 0.53m, Appro Left Time: 0.11h

Train--Epoch: 27, Step: 4231/4233

Eval--Epoch: 27, Step: 1058/1059 DDI Rate: 0.0863, Jaccard: 0.4147,

PRAUC: 0.6593, AVG PRC: 0.5557, AVG RECALL: 0.6416, AVG F1: 0.5760

avg med 17.365573770491803

Epoch: 27, Loss1: 0.3646, One Epoch Time: 0.53m, Appro Left Time:

0.11h

Train--Epoch: 28, Step: 4231/4233

Eval--Epoch: 28, Step: 1058/1059 DDI Rate: 0.0879, Jaccard: 0.4157,

PRAUC: 0.6597, AVG PRC: 0.5616, AVG RECALL: 0.6359, AVG F1: 0.5771

avg med 16.781147540983607

Epoch: 28, Loss1: 0.3656, One Epoch Time: 0.52m, Appro Left Time:

0.10h

Train--Epoch: 29, Step: 4231/4233

Eval--Epoch: 29, Step: 1058/1059 DDI Rate: 0.0871, Jaccard: 0.4157,

PRAUC: 0.6600, AVG\_PRC: 0.5738, AVG\_RECALL: 0.6214, AVG\_F1: 0.5774

avg med 15.677868852459016

Epoch: 29, Loss1: 0.3654, One Epoch Time: 0.52m, Appro Left Time:

0.09h

Train--Epoch: 30, Step: 4231/4233

Eval--Epoch: 30, Step: 1058/1059 DDI Rate: 0.0857, Jaccard: 0.4155,

PRAUC: 0.6592, AVG\_PRC: 0.5596, AVG\_RECALL: 0.6383, AVG\_F1: 0.5769

avg med 17.01311475409836

Epoch: 30, Loss1: 0.3631, One Epoch Time: 0.52m, Appro Left Time:

0.08h

Train--Epoch: 31, Step: 4231/4233

Eval--Epoch: 31, Step: 1058/1059 DDI Rate: 0.0876, Jaccard: 0.4154,

PRAUC: 0.6604, AVG\_PRC: 0.5703, AVG\_RECALL: 0.6240, AVG\_F1: 0.5768

avg med 16.014754098360655

Epoch: 31, Loss1: 0.3695, One Epoch Time: 0.53m, Appro Left Time:

0.07h

Train--Epoch: 32, Step: 4231/4233

Eval--Epoch: 32, Step: 1058/1059 DDI Rate: 0.0859, Jaccard: 0.4147,

PRAUC: 0.6578, AVG PRC: 0.5507, AVG RECALL: 0.6485, AVG F1: 0.5757

avg med 18.26311475409836

Epoch: 32, Loss1: 0.3612, One Epoch Time: 0.52m, Appro Left Time:

0.06h

Train--Epoch: 33, Step: 4231/4233

Eval--Epoch: 33, Step: 1058/1059 DDI Rate: 0.0842, Jaccard: 0.4153,

PRAUC: 0.6613, AVG PRC: 0.5796, AVG RECALL: 0.6138, AVG F1: 0.5768

avg med 15.322950819672132

Epoch: 33, Loss1: 0.3627, One Epoch Time: 0.53m, Appro Left Time:

0.05h

Train--Epoch: 34, Step: 4231/4233

Eval--Epoch: 34, Step: 1058/1059 DDI Rate: 0.0851, Jaccard: 0.4192,

PRAUC: 0.6612, AVG PRC: 0.5669, AVG RECALL: 0.6365, AVG F1: 0.5803

avg med 16.787704918032787

Epoch: 34, Loss1: 0.3606, One Epoch Time: 0.52m, Appro Left Time:

0.04h

Train--Epoch: 35, Step: 4231/4233

Eval--Epoch: 35, Step: 1058/1059 DDI Rate: 0.0819, Jaccard: 0.4187,

PRAUC: 0.6622, AVG PRC: 0.5832, AVG RECALL: 0.6164, AVG F1: 0.5804

avg med 15.277868852459017

Epoch: 35, Loss1: 0.3591, One Epoch Time: 0.52m, Appro Left Time:

0.03h

Train--Epoch: 36, Step: 4231/4233

Eval--Epoch: 36, Step: 1058/1059 DDI Rate: 0.0855, Jaccard: 0.4191,

PRAUC: 0.6602, AVG PRC: 0.5563, AVG RECALL: 0.6505, AVG F1: 0.5802

avg med 17.794262295081968

Epoch: 36, Loss1: 0.3595, One Epoch Time: 0.52m, Appro Left Time:

0.03h

Train--Epoch: 37, Step: 4231/4233

Eval--Epoch: 37, Step: 1058/1059 DDI Rate: 0.0871, Jaccard: 0.4184.

PRAUC: 0.6623, AVG PRC: 0.5653, AVG RECALL: 0.6368, AVG F1: 0.5796

avg med 16.618852459016395

Epoch: 37, Loss1: 0.3584, One Epoch Time: 0.52m, Appro Left Time:

0.02h

Train--Epoch: 38, Step: 4231/4233

Eval--Epoch: 38, Step: 1058/1059 DDI Rate: 0.0853, Jaccard: 0.4191,

PRAUC: 0.6629, AVG PRC: 0.5740, AVG RECALL: 0.6275, AVG F1: 0.5803

avg med 15.920491803278688

Epoch: 38, Loss1: 0.3577, One Epoch Time: 0.52m, Appro Left Time:

0.01h

Train--Epoch: 39, Step: 4231/4233

Eval--Epoch: 39, Step: 1058/1059 DDI Rate: 0.0856, Jaccard: 0.4197,

PRAUC: 0.6629, AVG PRC: 0.5795, AVG RECALL: 0.6229, AVG F1: 0.5813

avg med 15.625409836065574

Epoch: 39, Loss1: 0.3628, One Epoch Time: 0.52m, Appro Left Time:

0.00h

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## Latest run:

parameters 452434

Train--Epoch: 0, Step: 4232/4233, L\_p cnt: 5048, L\_neg cnt: 5427

Eval--Epoch: 0, Step: 1058/1059 DDI Rate: 0.0611, Jaccard: 0.3598, PRAUC: 0.6209, AVG\_PRC: 0.6300,

AVG\_RECALL: 0.4719, AVG\_F1: 0.5210

Epoch: 0, Loss: 0.1255, One Epoch Time: 1.87m, Appro Left Time: 1.21h

 $path\_\_saved/GAMENet/Epoch\_0\_JA\_0.3598\_DDI\_0.0611.model$ 

Train--Epoch: 1, Step: 4232/4233, L\_p cnt: 5592, L\_neg cnt: 4883

Eval--Epoch: 1, Step: 1058/1059 DDI Rate: 0.0231, Jaccard: 0.3586, PRAUC: 0.6297, AVG PRC: 0.6526,

AVG\_RECALL: 0.4591, AVG\_F1: 0.5194

Epoch: 1, Loss: 0.1332, One Epoch Time: 1.84m, Appro Left Time: 1.17h

path saved/GAMENet/Epoch 1 JA 0.3586 DDI 0.0231.model

Train--Epoch: 2, Step: 4232/4233, L\_p cnt: 6583, L\_neg cnt: 3892

Eval--Epoch: 2, Step: 1058/1059 DDI Rate: 0.0497, Jaccard: 0.3797, PRAUC: 0.6392, AVG\_PRC: 0.6445,

AVG\_RECALL: 0.4937, AVG\_F1: 0.5412

Epoch: 2, Loss: 0.1547, One Epoch Time: 1.83m, Appro Left Time: 1.13h

path\_\_ saved/GAMENet/Epoch\_2\_JA\_0.3797\_DDI\_0.0497.model

Train--Epoch: 3, Step: 4232/4233, L\_p cnt: 6524, L\_neg cnt: 3951

Eval--Epoch: 3, Step: 1058/1059 DDI Rate: 0.0559, Jaccard: 0.3982, PRAUC: 0.6552, AVG\_PRC: 0.6536,

AVG\_RECALL: 0.5130, AVG\_F1: 0.5575

Epoch: 3, Loss: 0.1421, One Epoch Time: 1.82m, Appro Left Time: 1.09h

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path__ saved/GAMENet/Epoch_3_JA_0.3982_DDI_0.0559.model
Train--Epoch: 4, Step: 4232/4233, L_p cnt: 5665, L_neg cnt: 4810
Eval--Epoch: 4, Step: 1058/1059
                                  DDI Rate: 0.0579, Jaccard: 0.4051, PRAUC: 0.6611, AVG_PRC: 0.6547,
AVG_RECALL: 0.5227, AVG_F1: 0.5640
        Epoch: 4, Loss: 0.1195, One Epoch Time: 1.80m, Appro Left Time: 1.05h
path saved/GAMENet/Epoch 4 JA 0.4051 DDI 0.0579.model
Train--Epoch: 5, Step: 4232/4233, L_p cnt: 5660, L_neg cnt: 4815
Eval--Epoch: 5, Step: 1058/1059
                                  DDI Rate: 0.0582, Jaccard: 0.4089, PRAUC: 0.6662, AVG_PRC: 0.6594,
AVG RECALL: 0.5261, AVG F1: 0.5680
        Epoch: 5, Loss: 0.1179, One Epoch Time: 1.79m, Appro Left Time: 1.01h
path saved/GAMENet/Epoch 5 JA 0.4089 DDI 0.0582.model
Train--Epoch: 6, Step: 4232/4233, L_p cnt: 5888, L_neg cnt: 4587
Eval--Epoch: 6, Step: 1058/1059
                                  DDI Rate: 0.0626, Jaccard: 0.4135, PRAUC: 0.6728, AVG_PRC: 0.6659,
AVG_RECALL: 0.5298, AVG_F1: 0.5727
        Epoch: 6, Loss: 0.1222, One Epoch Time: 1.80m, Appro Left Time: 0.99h
path saved/GAMENet/Epoch 6 JA 0.4135 DDI 0.0626.model
Train--Epoch: 7, Step: 4232/4233, L_p cnt: 6103, L_neg cnt: 4372
Eval--Epoch: 7, Step: 1058/1059
                                  DDI Rate: 0.0647, Jaccard: 0.4155, PRAUC: 0.6754, AVG_PRC: 0.6696,
AVG_RECALL: 0.5303, AVG_F1: 0.5746
        Epoch: 7, Loss: 0.1264, One Epoch Time: 1.76m, Appro Left Time: 0.94h
path__ saved/GAMENet/Epoch_7_JA_0.4155_DDI_0.0647.model
Train--Epoch: 8, Step: 4232/4233, L_p cnt: 6191, L_neg cnt: 4284
Eval--Epoch: 8, Step: 1058/1059
                                  DDI Rate: 0.0697, Jaccard: 0.4228, PRAUC: 0.6775, AVG_PRC: 0.6625,
AVG_RECALL: 0.5467, AVG_F1: 0.5821
        Epoch: 8, Loss: 0.1268, One Epoch Time: 1.75m, Appro Left Time: 0.91h
path saved/GAMENet/Epoch 8 JA 0.4228 DDI 0.0697.model
Train--Epoch: 9, Step: 4232/4233, L_p cnt: 6599, L_neg cnt: 3876
Eval--Epoch: 9, Step: 1058/1059
                                  DDI Rate: 0.0699, Jaccard: 0.4293, PRAUC: 0.6799, AVG PRC: 0.6564,
AVG RECALL: 0.5633, AVG F1: 0.5887
        Epoch: 9. Loss: 0.1346. One Epoch Time: 1.75m. Appro Left Time: 0.87h.
path__ saved/GAMENet/Epoch_9_JA_0.4293_DDI_0.0699.model
Train--Epoch: 10, Step: 4232/4233, L_p cnt: 6845, L_neg cnt: 3630
                                DDI Rate: 0.0757, Jaccard: 0.4309, PRAUC: 0.6823, AVG PRC: 0.6644,
Eval--Epoch: 10, Step: 1058/1059
AVG_RECALL: 0.5591, AVG_F1: 0.5899
        Epoch: 10, Loss: 0.1382, One Epoch Time: 1.74m, Appro Left Time: 0.84h
path saved/GAMENet/Epoch 10 JA 0.4309 DDI 0.0757.model
Train--Epoch: 11, Step: 4232/4233, L_p cnt: 7048, L_neg cnt: 3427
Eval--Epoch: 11, Step: 1058/1059
                                  DDI Rate: 0.0726, Jaccard: 0.4325, PRAUC: 0.6839, AVG_PRC: 0.6618,
AVG RECALL: 0.5654, AVG F1: 0.5918
        Epoch: 11, Loss: 0.1422, One Epoch Time: 1.75m, Appro Left Time: 0.82h
path__ saved/GAMENet/Epoch_11_JA_0.4325_DDI_0.0726.model
Train--Epoch: 12, Step: 4232/4233, L_p cnt: 7288, L_neg cnt: 3187
Eval--Epoch: 12, Step: 1058/1059
                                  DDI Rate: 0.0752, Jaccard: 0.4370, PRAUC: 0.6874, AVG PRC: 0.6601,
AVG RECALL: 0.5741, AVG F1: 0.5962
        Epoch: 12, Loss: 0.1461, One Epoch Time: 1.78m, Appro Left Time: 0.80h
path__ saved/GAMENet/Epoch_12_JA_0.4370_DDI_0.0752.model
```

Train--Epoch: 13, Step: 4232/4233, L p cnt: 7576, L neg cnt: 2899

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Eval--Epoch: 13, Step: 1058/1059
                                  DDI Rate: 0.0772, Jaccard: 0.4407, PRAUC: 0.6896, AVG_PRC: 0.6542,
AVG_RECALL: 0.5848, AVG_F1: 0.5997
        Epoch: 13, Loss: 0.1509, One Epoch Time: 1.75m, Appro Left Time: 0.76h
path saved/GAMENet/Epoch 13 JA 0.4407 DDI 0.0772.model
Train--Epoch: 14, Step: 4232/4233, L_p cnt: 7900, L_neg cnt: 2575
Eval--Epoch: 14, Step: 1058/1059
                                  DDI Rate: 0.0782, Jaccard: 0.4410, PRAUC: 0.6910, AVG_PRC: 0.6556,
AVG RECALL: 0.5849, AVG F1: 0.6001
        Epoch: 14, Loss: 0.1571, One Epoch Time: 1.76m, Appro Left Time: 0.73h
path saved/GAMENet/Epoch 14_JA 0.4410_DDI_0.0782.model
Train--Epoch: 15, Step: 4232/4233, L_p cnt: 8189, L_neg cnt: 2286
                                  DDI Rate: 0.0817, Jaccard: 0.4395, PRAUC: 0.6906, AVG_PRC: 0.6549,
Eval--Epoch: 15, Step: 1058/1059
AVG_RECALL: 0.5827, AVG_F1: 0.5986
        Epoch: 15, Loss: 0.1623, One Epoch Time: 1.75m, Appro Left Time: 0.70h
path saved/GAMENet/Epoch 15 JA 0.4395 DDI 0.0817.model
Train--Epoch: 16, Step: 4232/4233, L_p cnt: 8465, L_neg cnt: 2010
Eval--Epoch: 16, Step: 1058/1059
                                  DDI Rate: 0.0865, Jaccard: 0.4410, PRAUC: 0.6915, AVG_PRC: 0.6541,
AVG RECALL: 0.5861, AVG F1: 0.6001
        Epoch: 16, Loss: 0.1666, One Epoch Time: 1.76m, Appro Left Time: 0.67h
path__ saved/GAMENet/Epoch_16_JA_0.4410_DDI_0.0865.model
Train--Epoch: 17, Step: 4232/4233, L_p cnt: 8703, L_neg cnt: 1772
Eval--Epoch: 17, Step: 1058/1059
                                DDI Rate: 0.0839, Jaccard: 0.4442, PRAUC: 0.6938, AVG_PRC: 0.6500,
AVG_RECALL: 0.5949, AVG_F1: 0.6032
        Epoch: 17, Loss: 0.1708, One Epoch Time: 1.75m, Appro Left Time: 0.64h
path__saved/GAMENet/Epoch_17_JA_0.4442_DDI_0.0839.model
Train--Epoch: 18, Step: 4232/4233, L_p cnt: 8895, L_neg cnt: 1580
                                  DDI Rate: 0.0865, Jaccard: 0.4429, PRAUC: 0.6938, AVG PRC: 0.6499,
Eval--Epoch: 18, Step: 1058/1059
AVG RECALL: 0.5924, AVG F1: 0.6020
        Epoch: 18, Loss: 0.1739, One Epoch Time: 1.75m, Appro Left Time: 0.61h
path saved/GAMENet/Epoch 18 JA 0.4429 DDI 0.0865.model
Train--Epoch: 19, Step: 4232/4233, L_p cnt: 9138, L_neg cnt: 1337
Eval--Epoch: 19, Step: 1058/1059
                                  DDI Rate: 0.0842, Jaccard: 0.4459, PRAUC: 0.6947, AVG_PRC: 0.6428,
AVG RECALL: 0.6033, AVG F1: 0.6049
        Epoch: 19, Loss: 0.1781, One Epoch Time: 2.65m, Appro Left Time: 0.88h
path__ saved/GAMENet/Epoch_19_JA_0.4459_DDI_0.0842.model
Train--Epoch: 20, Step: 4232/4233, L_p cnt: 9276, L_neg cnt: 1199
Eval--Epoch: 20, Step: 1058/1059 DDI Rate: 0.0818, Jaccard: 0.4462, PRAUC: 0.6956, AVG PRC: 0.6439,
AVG RECALL: 0.6035, AVG F1: 0.6051
        Epoch: 20, Loss: 0.1799, One Epoch Time: 3.12m, Appro Left Time: 0.99h
path__ saved/GAMENet/Epoch_20_JA_0.4462_DDI_0.0818.model
Train--Epoch: 21, Step: 4232/4233, L_p cnt: 9455, L_neg cnt: 1020
Eval--Epoch: 21, Step: 1058/1059
                                  DDI Rate: 0.0867, Jaccard: 0.4480, PRAUC: 0.6955, AVG_PRC: 0.6427,
AVG RECALL: 0.6074, AVG F1: 0.6068
        Epoch: 21, Loss: 0.1825, One Epoch Time: 2.20m, Appro Left Time: 0.66h
path saved/GAMENet/Epoch 21 JA 0.4480 DDI 0.0867.model
Train--Epoch: 22, Step: 4232/4233, L p cnt: 9498, L neg cnt: 977
Eval--Epoch: 22. Step: 1058/1059
                                DDI Rate: 0.0891, Jaccard: 0.4470, PRAUC: 0.6961, AVG PRC: 0.6482,
AVG RECALL: 0.6023, AVG F1: 0.6059
```

Epoch: 22, Loss: 0.1819, One Epoch Time: 1.75m, Appro Left Time: 0.49h

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path__saved/GAMENet/Epoch_22_JA_0.4470_DDI_0.0891.model
Train--Epoch: 23, Step: 4232/4233, L_p cnt: 9649, L_neg cnt: 826
Eval--Epoch: 23, Step: 1058/1059
                                  DDI Rate: 0.0830, Jaccard: 0.4497, PRAUC: 0.6972, AVG_PRC: 0.6426,
AVG_RECALL: 0.6108, AVG_F1: 0.6080
        Epoch: 23, Loss: 0.1840, One Epoch Time: 1.77m, Appro Left Time: 0.47h
path__saved/GAMENet/Epoch_23_JA_0.4497_DDI_0.0830.model
Train--Epoch: 24, Step: 4232/4233, L_p cnt: 9743, L_neg cnt: 732
Eval--Epoch: 24, Step: 1058/1059
                                DDI Rate: 0.0790, Jaccard: 0.4486, PRAUC: 0.6973, AVG_PRC: 0.6479,
AVG_RECALL: 0.6041, AVG_F1: 0.6069
        Epoch: 24, Loss: 0.1851, One Epoch Time: 1.77m, Appro Left Time: 0.44h
path saved/GAMENet/Epoch 24 JA 0.4486 DDI 0.0790.model
Train--Epoch: 25, Step: 4232/4233, L_p cnt: 9832, L_neg cnt: 643
Eval--Epoch: 25, Step: 1058/1059
                                DDI Rate: 0.0829, Jaccard: 0.4507, PRAUC: 0.6984, AVG_PRC: 0.6461,
AVG_RECALL: 0.6101, AVG_F1: 0.6091
        Epoch: 25, Loss: 0.1856, One Epoch Time: 1.77m, Appro Left Time: 0.41h
path__saved/GAMENet/Epoch_25_JA_0.4507_DDI_0.0829.model
Train--Epoch: 26, Step: 4232/4233, L_p cnt: 9948, L_neg cnt: 527
Eval--Epoch: 26, Step: 1058/1059
                                  DDI Rate: 0.0859, Jaccard: 0.4515, PRAUC: 0.6984, AVG_PRC: 0.6441,
AVG_RECALL: 0.6142, AVG_F1: 0.6102
        Epoch: 26, Loss: 0.1875, One Epoch Time: 1.74m, Appro Left Time: 0.38h
path__ saved/GAMENet/Epoch_26_JA_0.4515_DDI_0.0859.model
Train--Epoch: 27, Step: 4232/4233, L_p cnt: 9996, L_neg cnt: 479
Eval--Epoch: 27, Step: 1058/1059
                                DDI Rate: 0.0812, Jaccard: 0.4516, PRAUC: 0.6976, AVG_PRC: 0.6410,
AVG_RECALL: 0.6163, AVG_F1: 0.6101
        Epoch: 27, Loss: 0.1875, One Epoch Time: 1.75m, Appro Left Time: 0.35h
path saved/GAMENet/Epoch 27 JA 0.4516 DDI 0.0812.model
Train--Epoch: 28, Step: 4232/4233, L_p cnt: 10061, L_neg cnt: 414
                                  DDI Rate: 0.0852, Jaccard: 0.4530, PRAUC: 0.6985, AVG PRC: 0.6432,
Eval--Epoch: 28, Step: 1058/1059
AVG RECALL: 0.6165, AVG F1: 0.6112
        Epoch: 28, Loss: 0.1876, One Epoch Time: 1.73m, Appro Left Time: 0.32h
path__ saved/GAMENet/Epoch_28_JA_0.4530_DDI_0.0852.model
Train--Epoch: 29, Step: 4232/4233, L_p cnt: 10120, L_neg cnt: 355
                                DDI Rate: 0.0851, Jaccard: 0.4518, PRAUC: 0.6988, AVG PRC: 0.6445,
Eval--Epoch: 29. Step: 1058/1059
AVG_RECALL: 0.6144, AVG_F1: 0.6102
        Epoch: 29, Loss: 0.1880, One Epoch Time: 1.74m, Appro Left Time: 0.29h
path saved/GAMENet/Epoch 29 JA 0.4518 DDI 0.0851.model
Train--Epoch: 30, Step: 4232/4233, L_p cnt: 10169, L_neg cnt: 306
Eval--Epoch: 30, Step: 1058/1059
                                  DDI Rate: 0.0855, Jaccard: 0.4520, PRAUC: 0.6988, AVG_PRC: 0.6405,
AVG RECALL: 0.6180, AVG F1: 0.6104
        Epoch: 30, Loss: 0.1877, One Epoch Time: 1.73m, Appro Left Time: 0.26h
path__ saved/GAMENet/Epoch_30_JA_0.4520_DDI_0.0855.model
Train--Epoch: 31, Step: 4232/4233, L_p cnt: 10248, L_neg cnt: 227
Eval--Epoch: 31, Step: 1058/1059
                                  DDI Rate: 0.0830, Jaccard: 0.4530, PRAUC: 0.6995, AVG PRC: 0.6450,
AVG RECALL: 0.6163, AVG F1: 0.6115
        Epoch: 31, Loss: 0.1887, One Epoch Time: 1.74m, Appro Left Time: 0.23h
path__ saved/GAMENet/Epoch_31_JA_0.4530_DDI_0.0830.model
```

Train--Epoch: 32, Step: 4232/4233, L p cnt: 10272, L neg cnt: 203

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Eval--Epoch: 32, Step: 1058/1059
                                  DDI Rate: 0.0812, Jaccard: 0.4535, PRAUC: 0.6993, AVG_PRC: 0.6444,
AVG_RECALL: 0.6170, AVG_F1: 0.6118
        Epoch: 32, Loss: 0.1883, One Epoch Time: 1.74m, Appro Left Time: 0.20h
path__saved/GAMENet/Epoch_32_JA_0.4535_DDI_0.0812.model
Train--Epoch: 33, Step: 4232/4233, L_p cnt: 10316, L_neg cnt: 159
Eval--Epoch: 33, Step: 1058/1059
                                  DDI Rate: 0.0843, Jaccard: 0.4542, PRAUC: 0.6989, AVG_PRC: 0.6395,
AVG RECALL: 0.6232, AVG F1: 0.6127
        Epoch: 33, Loss: 0.1883, One Epoch Time: 1.72m, Appro Left Time: 0.17h
path saved/GAMENet/Epoch 33 JA 0.4542 DDI 0.0843.model
Train--Epoch: 34, Step: 4232/4233, L_p cnt: 10340, L_neg cnt: 135
                                  DDI Rate: 0.0825, Jaccard: 0.4536, PRAUC: 0.6988, AVG PRC: 0.6424,
Eval--Epoch: 34, Step: 1058/1059
AVG_RECALL: 0.6197, AVG_F1: 0.6119
        Epoch: 34, Loss: 0.1879, One Epoch Time: 1.74m, Appro Left Time: 0.15h
path saved/GAMENet/Epoch 34 JA 0.4536 DDI 0.0825.model
Train--Epoch: 35, Step: 4232/4233, L_p cnt: 10368, L_neg cnt: 107
                                  DDI Rate: 0.0819, Jaccard: 0.4537, PRAUC: 0.6990, AVG_PRC: 0.6448,
Eval--Epoch: 35, Step: 1058/1059
AVG RECALL: 0.6162, AVG F1: 0.6117
        Epoch: 35, Loss: 0.1877, One Epoch Time: 1.73m, Appro Left Time: 0.12h
path__ saved/GAMENet/Epoch_35_JA_0.4537_DDI_0.0819.model
Train--Epoch: 36, Step: 4232/4233, L_p cnt: 10375, L_neg cnt: 100
Eval--Epoch: 36, Step: 1058/1059
                                DDI Rate: 0.0847, Jaccard: 0.4540, PRAUC: 0.6987, AVG_PRC: 0.6444,
AVG_RECALL: 0.6174, AVG_F1: 0.6120
        Epoch: 36, Loss: 0.1869, One Epoch Time: 1.76m, Appro Left Time: 0.09h
path saved/GAMENet/Epoch 36 JA 0.4540 DDI 0.0847.model
Train--Epoch: 37, Step: 4232/4233, L_p cnt: 10403, L_neg cnt: 72
                                  DDI Rate: 0.0826, Jaccard: 0.4529, PRAUC: 0.6989, AVG PRC: 0.6404,
Eval--Epoch: 37, Step: 1058/1059
AVG RECALL: 0.6199, AVG F1: 0.6112
        Epoch: 37, Loss: 0.1866, One Epoch Time: 1.78m, Appro Left Time: 0.06h
path saved/GAMENet/Epoch 37 JA 0.4529 DDI 0.0826.model
Train--Epoch: 38, Step: 4232/4233, L_p cnt: 10427, L_neg cnt: 48
Eval--Epoch: 38, Step: 1058/1059
                                  DDI Rate: 0.0850, Jaccard: 0.4518, PRAUC: 0.6985, AVG PRC: 0.6377,
AVG RECALL: 0.6200, AVG F1: 0.6102
        Epoch: 38, Loss: 0.1864, One Epoch Time: 1.74m, Appro Left Time: 0.03h
path__ saved/GAMENet/Epoch_38_JA_0.4518_DDI_0.0850.model
Train--Epoch: 39, Step: 4232/4233, L_p cnt: 10436, L_neg cnt: 39
Eval--Epoch: 39, Step: 1058/1059 DDI Rate: 0.0807, Jaccard: 0.4528, PRAUC: 0.6982, AVG PRC: 0.6417,
AVG RECALL: 0.6177, AVG F1: 0.6109
        Epoch: 39, Loss: 0.1858, One Epoch Time: 1.74m, Appro Left Time: 0.00h
```

path\_\_ saved/GAMENet/Epoch\_39\_JA\_0.4528\_DDI\_0.0807.model