

```
1 ssh://sangsq@10.50.221.195:22/home/sangsq/anaconda3/bin/
2 python -u /home/sangsq/.pycharm_helpers/pydev/pydevconsole.py --mode=server
3
4 import sys; print('Python %s on %s' % (sys.version, sys.
5 platform))
6 sys.path.extend(['/home/sangsq/flower/PSEP', '/home/sangsq/
7 flower/PSEP'])
8
9 Python 3.7.3 (default, Mar 27 2019, 22:11:17)
10 Type 'copyright', 'credits' or 'license' for more
11 information
12 IPython 7.4.0 -- An enhanced Interactive Python. Type '?' for help.
13 PyDev console: using IPython 7.4.0
14
15 Python 3.7.3 (default, Mar 27 2019, 22:11:17)
16 [GCC 7.3.0] on linux
17 In[2]: runfile('/home/sangsq/flower/PSEP/model/main.py',
18 wdir='/home/sangsq/flower/PSEP/model')
19 loading data
20 remove 0 isolated drugs: []
21 remove finished
22 963 polypharmacy side effects
23 data has been loaded
24 cuda
25 model training ...
26
27 0 loss:1.3961 auprc:0.4953 auroc:0.4993 ap@50:0.
28 4958
29 1 loss:1.3961 auprc:0.4959 auroc:0.4989 ap@50:0.
30 4997 time:69.9
31
32 2 loss:1.3911 auprc:0.4964 auroc:0.5003 ap@50:0.
33 4973
34 1 loss:1.3911 auprc:0.4968 auroc:0.4994 ap@50:0.
35 5010 time:70.5
36
37 2 loss:1.3887 auprc:0.4973 auroc:0.5005 ap@50:0.
38 4979
39 2 loss:1.3887 auprc:0.4979 auroc:0.5000 ap@50:0.
40 5019 time:68.8
41
42 3 loss:1.3874 auprc:0.4993 auroc:0.5012 ap@50:0.
43 4998
44 3 loss:1.3874 auprc:0.4997 auroc:0.5007 ap@50:0.
45 5035 time:68.3
46
47 4 loss:1.3868 auprc:0.5008 auroc:0.5016 ap@50:0.
48 4998
49 4 loss:1.3868 auprc:0.5007 auroc:0.5008 ap@50:0.
50 5032 time:68.2
```

35					
36	5	loss:1.3865	auprc:0.5012	auroc:0.5022	ap@50:0.
	5013				
37	5	loss:1.3865	auprc:0.5015	auroc:0.5018	ap@50:0.
	5047	time:66.7			
38					
39	6	loss:1.3863	auprc:0.5008	auroc:0.5025	ap@50:0.
	5038				
40	6	loss:1.3863	auprc:0.5014	auroc:0.5028	ap@50:0.
	5072	time:67.0			
41					
42	7	loss:1.3863	auprc:0.5038	auroc:0.5031	ap@50:0.
	5014				
43	7	loss:1.3863	auprc:0.5034	auroc:0.5027	ap@50:0.
	5044	time:67.0			
44					
45	8	loss:1.3862	auprc:0.5057	auroc:0.5035	ap@50:0.
	4997				
46	8	loss:1.3862	auprc:0.5056	auroc:0.5034	ap@50:0.
	5031	time:67.5			
47					
48	9	loss:1.3862	auprc:0.5040	auroc:0.5033	ap@50:0.
	4976				
49	9	loss:1.3862	auprc:0.5032	auroc:0.5029	ap@50:0.
	5011	time:68.4			
50					
51	10	loss:1.3861	auprc:0.5022	auroc:0.5042	ap@50:0.
	4984				
52	10	loss:1.3861	auprc:0.5021	auroc:0.5040	ap@50:0.
	5020	time:67.9			
53					
54	11	loss:1.3861	auprc:0.5010	auroc:0.5045	ap@50:0.
	4948				
55	11	loss:1.3861	auprc:0.5014	auroc:0.5047	ap@50:0.
	4988	time:67.7			
56					
57	12	loss:1.3859	auprc:0.4960	auroc:0.5055	ap@50:0.
	4917				
58	12	loss:1.3859	auprc:0.4982	auroc:0.5067	ap@50:0.
	4962	time:68.7			
59					
60	13	loss:1.3857	auprc:0.4972	auroc:0.5099	ap@50:0.
	4958				
61	13	loss:1.3857	auprc:0.4994	auroc:0.5106	ap@50:0.
	5002	time:67.9			
62					
63	14	loss:1.3853	auprc:0.5015	auroc:0.5145	ap@50:0.
	5010				
64	14	loss:1.3853	auprc:0.5040	auroc:0.5160	ap@50:0.
	5059	time:70.1			
65					

66	15	loss:1.3847 5028	auprc:0.5046	auroc:0.5206	ap@50:0.
67	15	loss:1.3847 5077	auprc:0.5078 time:70.3	auroc:0.5222	ap@50:0.
68					
69	16	loss:1.3838 5102	auprc:0.5110	auroc:0.5281	ap@50:0.
70	16	loss:1.3838 5153	auprc:0.5140 time:70.1	auroc:0.5300	ap@50:0.
71					
72	17	loss:1.3824 5203	auprc:0.5205	auroc:0.5373	ap@50:0.
73	17	loss:1.3824 5256	auprc:0.5238 time:68.9	auroc:0.5394	ap@50:0.
74					
75	18	loss:1.3803 5319	auprc:0.5318	auroc:0.5470	ap@50:0.
76	18	loss:1.3803 5376	auprc:0.5352 time:69.2	auroc:0.5499	ap@50:0.
77					
78	19	loss:1.3773 5442	auprc:0.5442	auroc:0.5585	ap@50:0.
79	19	loss:1.3773 5504	auprc:0.5481 time:68.5	auroc:0.5619	ap@50:0.
80					
81	20	loss:1.3733 5573	auprc:0.5573	auroc:0.5711	ap@50:0.
82	20	loss:1.3733 5638	auprc:0.5613 time:68.9	auroc:0.5750	ap@50:0.
83					
84	21	loss:1.3677 5726	auprc:0.5726	auroc:0.5853	ap@50:0.
85	21	loss:1.3677 5794	auprc:0.5770 time:68.9	auroc:0.5896	ap@50:0.
86					
87	22	loss:1.3600 5891	auprc:0.5889	auroc:0.6010	ap@50:0.
88	22	loss:1.3600 5956	auprc:0.5931 time:69.9	auroc:0.6057	ap@50:0.
89					
90	23	loss:1.3498 6051	auprc:0.6049	auroc:0.6176	ap@50:0.
91	23	loss:1.3498 6124	auprc:0.6100 time:69.3	auroc:0.6235	ap@50:0.
92					
93	24	loss:1.3365 6227	auprc:0.6225	auroc:0.6360	ap@50:0.
94	24	loss:1.3365 6305	auprc:0.6281 time:68.8	auroc:0.6425	ap@50:0.
95					
96	25	loss:1.3200	auprc:0.6403	auroc:0.6544	ap@50:0.

96	6405				
97	25	loss:1.3200	auprc:0.6463	auroc:0.6618	ap@50:0.
	6486	time:68.8			
98					
99	26	loss:1.2995	auprc:0.6572	auroc:0.6728	ap@50:0.
	6575				
100	26	loss:1.2995	auprc:0.6634	auroc:0.6806	ap@50:0.
	6658	time:69.4			
101					
102	27	loss:1.2757	auprc:0.6715	auroc:0.6890	ap@50:0.
	6718				
103	27	loss:1.2757	auprc:0.6784	auroc:0.6979	ap@50:0.
	6807	time:68.4			
104					
105	28	loss:1.2502	auprc:0.6863	auroc:0.7059	ap@50:0.
	6866				
106	28	loss:1.2502	auprc:0.6933	auroc:0.7149	ap@50:0.
	6955	time:68.9			
107					
108	29	loss:1.2251	auprc:0.7050	auroc:0.7255	ap@50:0.
	7052				
109	29	loss:1.2251	auprc:0.7125	auroc:0.7348	ap@50:0.
	7146	time:69.0			
110					
111	30	loss:1.1964	auprc:0.7213	auroc:0.7428	ap@50:0.
	7215				
112	30	loss:1.1964	auprc:0.7297	auroc:0.7524	ap@50:0.
	7316	time:69.1			
113					
114	31	loss:1.1666	auprc:0.7408	auroc:0.7617	ap@50:0.
	7409				
115	31	loss:1.1666	auprc:0.7504	auroc:0.7719	ap@50:0.
	7521	time:69.0			
116					
117	32	loss:1.1363	auprc:0.7583	auroc:0.7786	ap@50:0.
	7584				
118	32	loss:1.1363	auprc:0.7688	auroc:0.7899	ap@50:0.
	7704	time:69.6			
119					
120	33	loss:1.1036	auprc:0.7753	auroc:0.7950	ap@50:0.
	7755				
121	33	loss:1.1036	auprc:0.7861	auroc:0.8063	ap@50:0.
	7876	time:68.3			
122					
123	34	loss:1.0725	auprc:0.7926	auroc:0.8112	ap@50:0.
	7927				
124	34	loss:1.0725	auprc:0.8038	auroc:0.8226	ap@50:0.
	8052	time:69.4			
125					
126	35	loss:1.0384	auprc:0.8095	auroc:0.8275	ap@50:0.
	8096				

127	35	loss:1.0384 8216 time:68.6	auprc:0.8204	auroc:0.8386	ap@50:0.
128					
129	36	loss:1.0063 8242	auprc:0.8241	auroc:0.8421	ap@50:0.
130	36	loss:1.0063 8358 time:69.3	auprc:0.8347	auroc:0.8526	ap@50:0.
131					
132	37	loss:0.9754 8371	auprc:0.8370	auroc:0.8553	ap@50:0.
133	37	loss:0.9754 8485 time:69.2	auprc:0.8474	auroc:0.8651	ap@50:0.
134					
135	38	loss:0.9463 8508	auprc:0.8507	auroc:0.8686	ap@50:0.
136	38	loss:0.9463 8615 time:67.9	auprc:0.8605	auroc:0.8774	ap@50:0.
137					
138	39	loss:0.9199 8635	auprc:0.8634	auroc:0.8804	ap@50:0.
139	39	loss:0.9199 8730 time:68.3	auprc:0.8721	auroc:0.8879	ap@50:0.
140					
141	40	loss:0.8945 8716	auprc:0.8715	auroc:0.8875	ap@50:0.
142	40	loss:0.8945 8803 time:69.3	auprc:0.8795	auroc:0.8944	ap@50:0.
143					
144	41	loss:0.8706 8808	auprc:0.8808	auroc:0.8962	ap@50:0.
145	41	loss:0.8706 8886 time:68.7	auprc:0.8878	auroc:0.9023	ap@50:0.
146					
147	42	loss:0.8469 8874	auprc:0.8874	auroc:0.9024	ap@50:0.
148	42	loss:0.8469 8949 time:67.9	auprc:0.8942	auroc:0.9082	ap@50:0.
149					
150	43	loss:0.8248 8944	auprc:0.8944	auroc:0.9091	ap@50:0.
151	43	loss:0.8248 9010 time:68.0	auprc:0.9004	auroc:0.9143	ap@50:0.
152					
153	44	loss:0.8041 8996	auprc:0.8995	auroc:0.9143	ap@50:0.
154	44	loss:0.8041 9055 time:68.1	auprc:0.9049	auroc:0.9189	ap@50:0.
155					
156	45	loss:0.7859 9032	auprc:0.9032	auroc:0.9181	ap@50:0.
157	45	loss:0.7859 9032	auprc:0.9088	auroc:0.9228	ap@50:0.

157	9094	time:68.1			
158					
159	46	loss:0.7674	auprc:0.9082	auroc:0.9234	ap@50:0.
	9082				
160	46	loss:0.7674	auprc:0.9140	auroc:0.9278	ap@50:0.
	9145	time:69.9			
161					
162	47	loss:0.7513	auprc:0.9133	auroc:0.9282	ap@50:0.
	9133				
163	47	loss:0.7513	auprc:0.9182	auroc:0.9321	ap@50:0.
	9187	time:68.0			
164					
165	48	loss:0.7352	auprc:0.9172	auroc:0.9322	ap@50:0.
	9172				
166	48	loss:0.7352	auprc:0.9225	auroc:0.9363	ap@50:0.
	9230	time:68.4			
167					
168	49	loss:0.7209	auprc:0.9218	auroc:0.9367	ap@50:0.
	9218				
169	49	loss:0.7209	auprc:0.9263	auroc:0.9397	ap@50:0.
	9268	time:68.7			
170					
171	50	loss:0.7073	auprc:0.9253	auroc:0.9399	ap@50:0.
	9254				
172	50	loss:0.7073	auprc:0.9294	auroc:0.9424	ap@50:0.
	9299	time:68.3			
173					
174	51	loss:0.6949	auprc:0.9287	auroc:0.9426	ap@50:0.
	9287				
175	51	loss:0.6949	auprc:0.9321	auroc:0.9446	ap@50:0.
	9326	time:68.2			
176					
177	52	loss:0.6833	auprc:0.9309	auroc:0.9445	ap@50:0.
	9309				
178	52	loss:0.6833	auprc:0.9340	auroc:0.9462	ap@50:0.
	9344	time:68.4			
179					
180	53	loss:0.6726	auprc:0.9329	auroc:0.9461	ap@50:0.
	9330				
181	53	loss:0.6726	auprc:0.9356	auroc:0.9476	ap@50:0.
	9360	time:67.9			
182					
183	54	loss:0.6630	auprc:0.9347	auroc:0.9476	ap@50:0.
	9347				
184	54	loss:0.6630	auprc:0.9371	auroc:0.9490	ap@50:0.
	9375	time:68.1			
185					
186	55	loss:0.6551	auprc:0.9361	auroc:0.9489	ap@50:0.
	9362				
187	55	loss:0.6551	auprc:0.9386	auroc:0.9502	ap@50:0.
	9390	time:68.8			

188					
189	56	loss:0.6486	auprc:0.9373	auroc:0.9500	ap@50:0.
	9374				
190	56	loss:0.6486	auprc:0.9397	auroc:0.9512	ap@50:0.
	9401	time:68.9			
191					
192	57	loss:0.6427	auprc:0.9384	auroc:0.9508	ap@50:0.
	9385				
193	57	loss:0.6427	auprc:0.9407	auroc:0.9519	ap@50:0.
	9411	time:68.7			
194					
195	58	loss:0.6345	auprc:0.9395	auroc:0.9516	ap@50:0.
	9396				
196	58	loss:0.6345	auprc:0.9414	auroc:0.9525	ap@50:0.
	9418	time:69.0			
197					
198	59	loss:0.6285	auprc:0.9403	auroc:0.9522	ap@50:0.
	9403				
199	59	loss:0.6285	auprc:0.9421	auroc:0.9530	ap@50:0.
	9425	time:71.2			
200					
201	60	loss:0.6250	auprc:0.9409	auroc:0.9526	ap@50:0.
	9409				
202	60	loss:0.6250	auprc:0.9426	auroc:0.9534	ap@50:0.
	9430	time:68.6			
203					
204	61	loss:0.6204	auprc:0.9412	auroc:0.9529	ap@50:0.
	9412				
205	61	loss:0.6204	auprc:0.9430	auroc:0.9537	ap@50:0.
	9433	time:68.7			
206					
207	62	loss:0.6155	auprc:0.9414	auroc:0.9531	ap@50:0.
	9414				
208	62	loss:0.6155	auprc:0.9433	auroc:0.9539	ap@50:0.
	9436	time:68.9			
209					
210	63	loss:0.6127	auprc:0.9419	auroc:0.9534	ap@50:0.
	9419				
211	63	loss:0.6127	auprc:0.9436	auroc:0.9542	ap@50:0.
	9439	time:67.6			
212					
213	64	loss:0.6103	auprc:0.9420	auroc:0.9536	ap@50:0.
	9420				
214	64	loss:0.6103	auprc:0.9438	auroc:0.9544	ap@50:0.
	9441	time:70.1			
215					
216	65	loss:0.6063	auprc:0.9423	auroc:0.9539	ap@50:0.
	9423				
217	65	loss:0.6063	auprc:0.9440	auroc:0.9546	ap@50:0.
	9444	time:69.9			
218					

219	66	loss:0.6040 9425	auprc:0.9425	auroc:0.9540	ap@50:0.
220	66	loss:0.6040 9445	auprc:0.9442 time:69.4	auroc:0.9547	ap@50:0.
221					
222	67	loss:0.6021 9426	auprc:0.9426	auroc:0.9541	ap@50:0.
223	67	loss:0.6021 9446	auprc:0.9443 time:69.3	auroc:0.9548	ap@50:0.
224					
225	68	loss:0.5992 9430	auprc:0.9429	auroc:0.9544	ap@50:0.
226	68	loss:0.5992 9448	auprc:0.9444 time:67.2	auroc:0.9550	ap@50:0.
227					
228	69	loss:0.5974 9429	auprc:0.9429	auroc:0.9545	ap@50:0.
229	69	loss:0.5974 9449	auprc:0.9446 time:68.4	auroc:0.9552	ap@50:0.
230					
231	70	loss:0.5962 9431	auprc:0.9431	auroc:0.9546	ap@50:0.
232	70	loss:0.5962 9450	auprc:0.9447 time:69.9	auroc:0.9553	ap@50:0.
233					
234	71	loss:0.5947 9433	auprc:0.9432	auroc:0.9548	ap@50:0.
235	71	loss:0.5947 9452	auprc:0.9449 time:68.7	auroc:0.9555	ap@50:0.
236					
237	72	loss:0.5926 9436	auprc:0.9435	auroc:0.9551	ap@50:0.
238	72	loss:0.5926 9453	auprc:0.9450 time:69.1	auroc:0.9556	ap@50:0.
239					
240	73	loss:0.5919 9435	auprc:0.9434	auroc:0.9549	ap@50:0.
241	73	loss:0.5919 9454	auprc:0.9451 time:69.3	auroc:0.9557	ap@50:0.
242					
243	74	loss:0.5913 9436	auprc:0.9435	auroc:0.9551	ap@50:0.
244	74	loss:0.5913 9455	auprc:0.9452 time:69.2	auroc:0.9559	ap@50:0.
245					
246	75	loss:0.5893 9439	auprc:0.9438	auroc:0.9553	ap@50:0.
247	75	loss:0.5893 9456	auprc:0.9453 time:69.1	auroc:0.9559	ap@50:0.
248					
249	76	loss:0.5883	auprc:0.9437	auroc:0.9552	ap@50:0.

249	9437				
250	76	loss:0.5883	auprc:0.9454	auroc:0.9560	ap@50:0.
	9457	time:68.7			
251					
252	77	loss:0.5878	auprc:0.9436	auroc:0.9553	ap@50:0.
	9436				
253	77	loss:0.5878	auprc:0.9455	auroc:0.9561	ap@50:0.
	9458	time:69.4			
254					
255	78	loss:0.5872	auprc:0.9440	auroc:0.9554	ap@50:0.
	9440				
256	78	loss:0.5872	auprc:0.9455	auroc:0.9561	ap@50:0.
	9458	time:68.5			
257					
258	79	loss:0.5863	auprc:0.9440	auroc:0.9555	ap@50:0.
	9441				
259	79	loss:0.5863	auprc:0.9457	auroc:0.9562	ap@50:0.
	9460	time:69.0			
260					
261	80	loss:0.5854	auprc:0.9440	auroc:0.9555	ap@50:0.
	9440				
262	80	loss:0.5854	auprc:0.9457	auroc:0.9562	ap@50:0.
	9460	time:69.2			
263					
264	81	loss:0.5850	auprc:0.9440	auroc:0.9556	ap@50:0.
	9441				
265	81	loss:0.5850	auprc:0.9457	auroc:0.9563	ap@50:0.
	9460	time:69.6			
266					
267	82	loss:0.5841	auprc:0.9441	auroc:0.9556	ap@50:0.
	9441				
268	82	loss:0.5841	auprc:0.9458	auroc:0.9563	ap@50:0.
	9461	time:69.1			
269					
270	83	loss:0.5838	auprc:0.9442	auroc:0.9557	ap@50:0.
	9442				
271	83	loss:0.5838	auprc:0.9457	auroc:0.9563	ap@50:0.
	9460	time:68.6			
272					
273	84	loss:0.5840	auprc:0.9441	auroc:0.9556	ap@50:0.
	9441				
274	84	loss:0.5840	auprc:0.9458	auroc:0.9564	ap@50:0.
	9461	time:69.6			
275					
276	85	loss:0.5836	auprc:0.9441	auroc:0.9557	ap@50:0.
	9441				
277	85	loss:0.5836	auprc:0.9458	auroc:0.9564	ap@50:0.
	9461	time:69.6			
278					
279	86	loss:0.5826	auprc:0.9443	auroc:0.9558	ap@50:0.
	9444				

280	86	loss:0.5826 9462	auprc:0.9459 time:68.1	auroc:0.9564	ap@50:0.
281					
282	87	loss:0.5819 9444	auprc:0.9443	auroc:0.9558	ap@50:0.
283	87	loss:0.5819 9461	auprc:0.9458 time:68.9	auroc:0.9564	ap@50:0.
284					
285	88	loss:0.5821 9441	auprc:0.9440	auroc:0.9557	ap@50:0.
286	88	loss:0.5821 9462	auprc:0.9459 time:68.3	auroc:0.9565	ap@50:0.
287					
288	89	loss:0.5814 9441	auprc:0.9440	auroc:0.9557	ap@50:0.
289	89	loss:0.5814 9462	auprc:0.9458 time:68.9	auroc:0.9565	ap@50:0.
290					
291	90	loss:0.5816 9440	auprc:0.9439	auroc:0.9556	ap@50:0.
292	90	loss:0.5816 9462	auprc:0.9459 time:69.2	auroc:0.9565	ap@50:0.
293					
294	91	loss:0.5811 9441	auprc:0.9441	auroc:0.9558	ap@50:0.
295	91	loss:0.5811 9462	auprc:0.9459 time:68.6	auroc:0.9565	ap@50:0.
296					
297	92	loss:0.5811 9442	auprc:0.9441	auroc:0.9558	ap@50:0.
298	92	loss:0.5811 9462	auprc:0.9459 time:69.2	auroc:0.9565	ap@50:0.
299					
300	93	loss:0.5811 9444	auprc:0.9444	auroc:0.9559	ap@50:0.
301	93	loss:0.5811 9463	auprc:0.9460 time:68.9	auroc:0.9566	ap@50:0.
302					
303	94	loss:0.5816 9443	auprc:0.9442	auroc:0.9558	ap@50:0.
304	94	loss:0.5816 9462	auprc:0.9459 time:68.7	auroc:0.9565	ap@50:0.
305					
306	95	loss:0.5822 9443	auprc:0.9442	auroc:0.9560	ap@50:0.
307	95	loss:0.5822 9463	auprc:0.9460 time:69.5	auroc:0.9566	ap@50:0.
308					
309	96	loss:0.5827 9443	auprc:0.9443	auroc:0.9558	ap@50:0.
310	96	loss:0.5827	auprc:0.9459	auroc:0.9565	ap@50:0.

```
310 9462    time:69.2
311
312 97    loss:0.5810    auprc:0.9442    auroc:0.9559    ap@50:0.
         9442
313 97    loss:0.5810    auprc:0.9460    auroc:0.9566    ap@50:0.
         9463    time:68.7
314
315 98    loss:0.5790    auprc:0.9444    auroc:0.9559    ap@50:0.
         9444
316 98    loss:0.5790    auprc:0.9460    auroc:0.9566    ap@50:0.
         9463    time:69.1
317
318 99    loss:0.5797    auprc:0.9441    auroc:0.9558    ap@50:0.
         9442
319 99    loss:0.5797    auprc:0.9460    auroc:0.9566    ap@50:0.
         9463    time:68.2
320
321
```