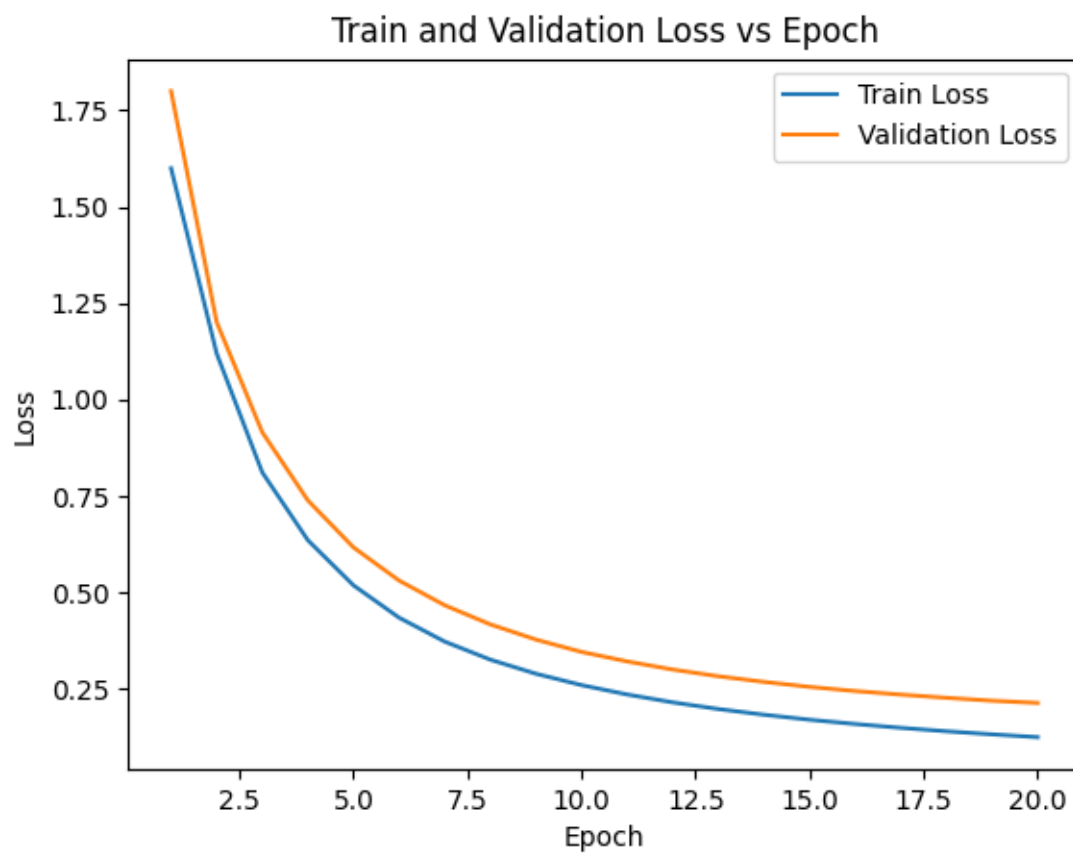


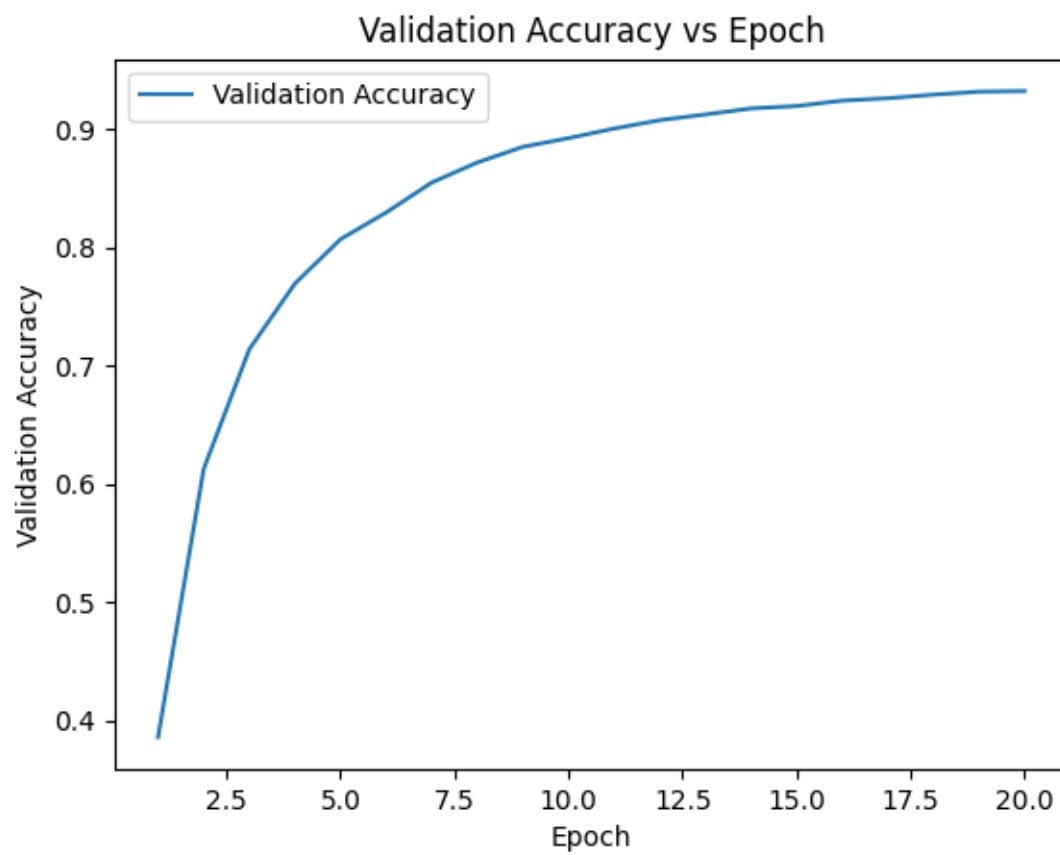
Train Loss, Validation Loss, Validation Accuracy, Validation F1 Score for
Learning rate = 0.001

Epoch	Train_Loss	Validation_Loss	Validation_Accuracy	Validation_F1
1	1.599846	1.799742	0.385689	0.374767
2	1.119757	1.200995	0.612535	0.6106
3	0.811733	0.915765	0.713778	0.713217
4	0.636052	0.739205	0.769348	0.769087
5	0.519168	0.617419	0.806902	0.806822
6	0.43542	0.531504	0.829485	0.829241
7	0.373432	0.467574	0.854859	0.854948
8	0.326692	0.417987	0.87186	0.871806
9	0.290137	0.378684	0.885055	0.88506
10	0.260711	0.346663	0.892413	0.892599
11	0.2364	0.322116	0.900533	0.900665
12	0.21597	0.300995	0.907638	0.907742
13	0.19874	0.283583	0.912459	0.912564
14	0.183981	0.268988	0.917534	0.917651
15	0.171019	0.256114	0.919564	0.919693
16	0.159947	0.24533	0.924131	0.924111
17	0.149998	0.236104	0.926161	0.926074
18	0.141102	0.227827	0.929206	0.929076
19	0.133178	0.220248	0.931743	0.93166
20	0.125885	0.214504	0.932251	0.932111

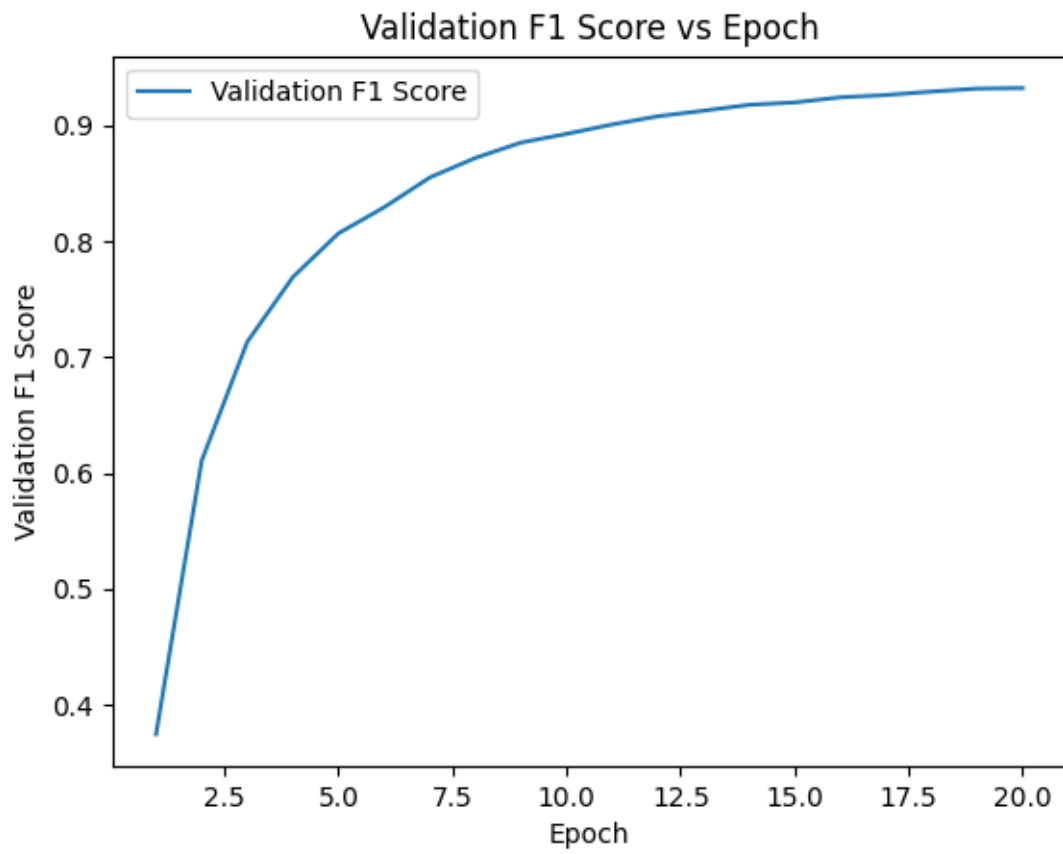
Train and Validation Loss vs Epoch



Validation Accuracy Vs Epoch



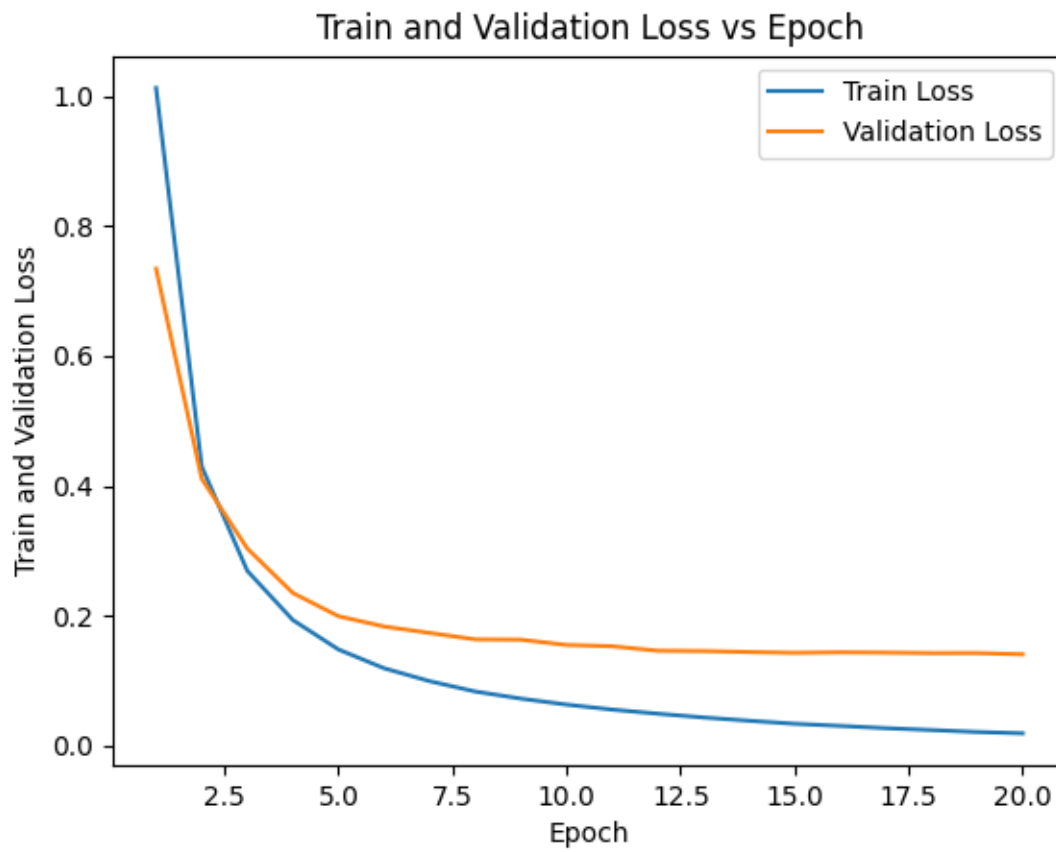
Validation F1 Score Vs Epoch



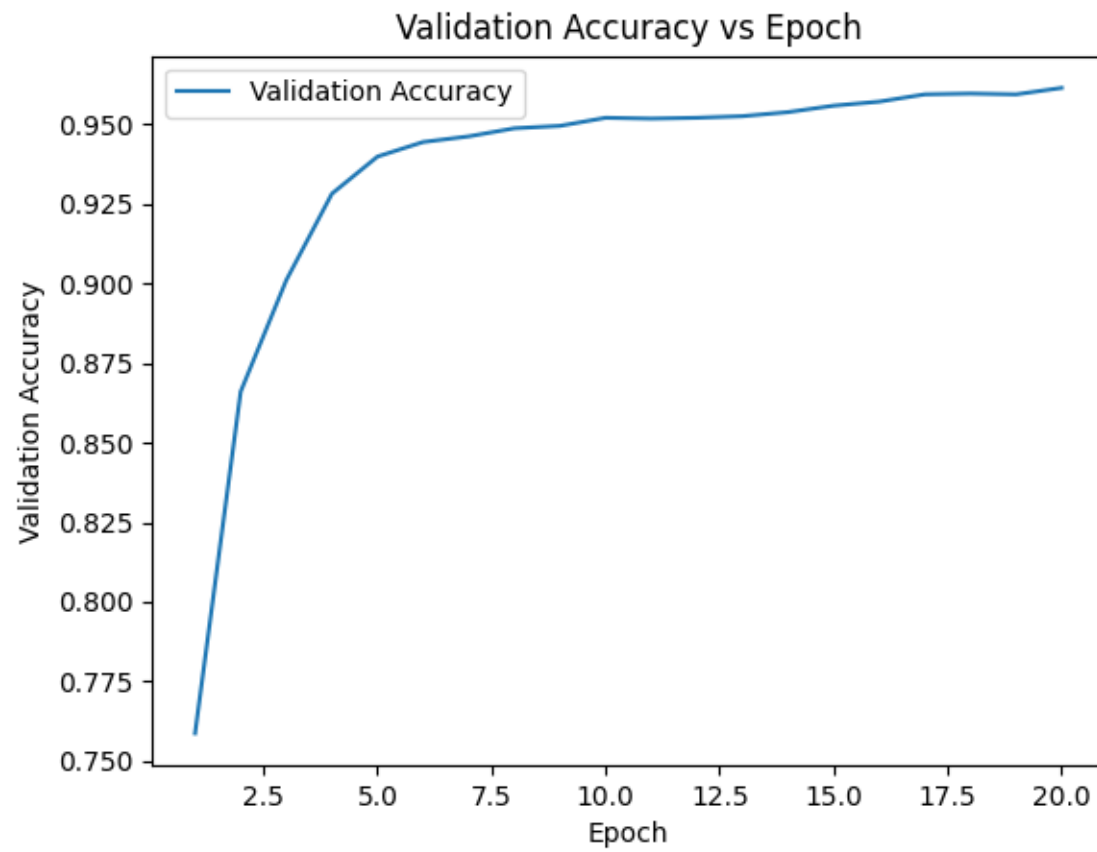
Train Loss, Validation Loss, Validation Accuracy, Validation F1 Score for
Learning rate = 0.005

Epoch	Train_Loss	Validation_Loss	Validation_Accuracy	Validation_F1
1	1.012255	0.734131	0.758691	0.753935
2	0.429931	0.410998	0.866024	0.865843
3	0.269276	0.303594	0.90104	0.900891
4	0.193527	0.235114	0.928191	0.927882
5	0.148219	0.199402	0.939863	0.939518
6	0.119352	0.183565	0.94443	0.944031
7	0.099456	0.173641	0.946207	0.945699
8	0.08356	0.163789	0.948744	0.948323
9	0.072633	0.163337	0.949505	0.949134
10	0.063421	0.155172	0.952043	0.95174
11	0.055782	0.153238	0.951789	0.951503
12	0.04945	0.146334	0.952043	0.951841
13	0.043664	0.145785	0.95255	0.952311
14	0.038633	0.144349	0.953819	0.953615
15	0.033947	0.143125	0.955849	0.955635
16	0.0307	0.14392	0.957117	0.9569
17	0.027162	0.143479	0.959401	0.959175
18	0.024314	0.142595	0.959655	0.95944
19	0.021324	0.142671	0.959401	0.959192
20	0.019291	0.140878	0.961431	0.961252

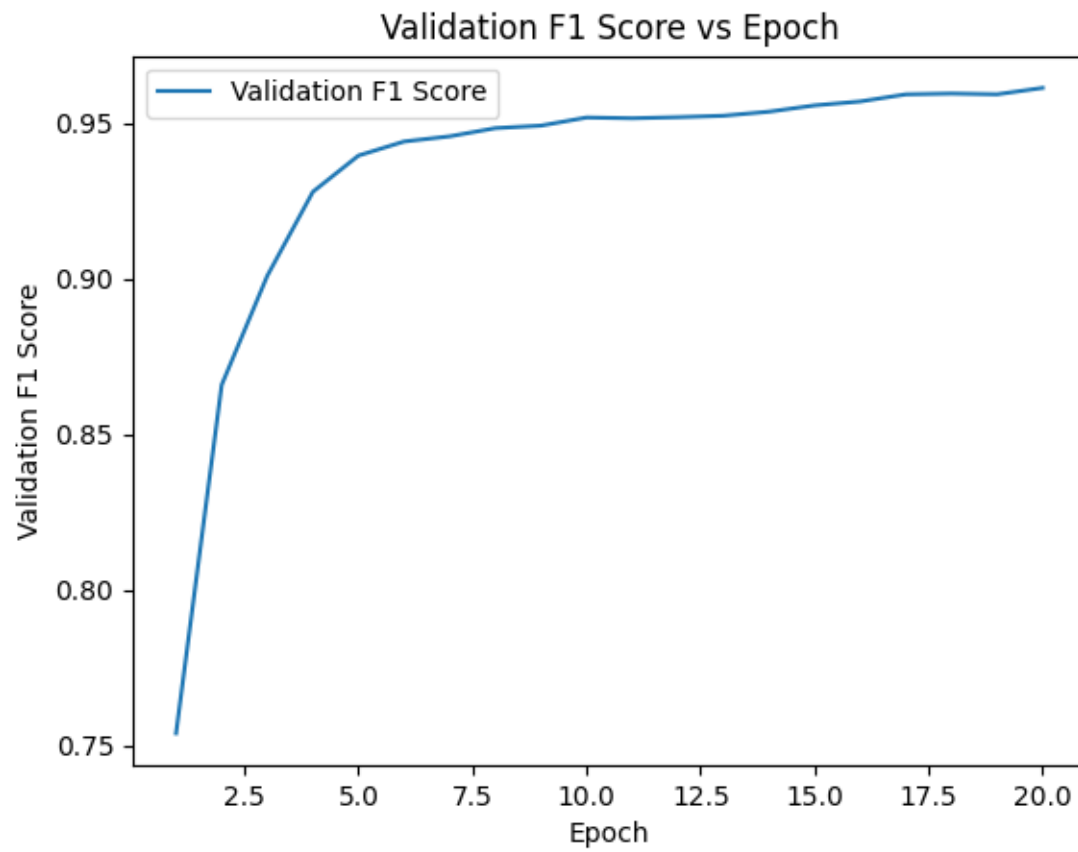
Train and Validation Loss vs Epoch



Validation Accuracy Vs Epoch



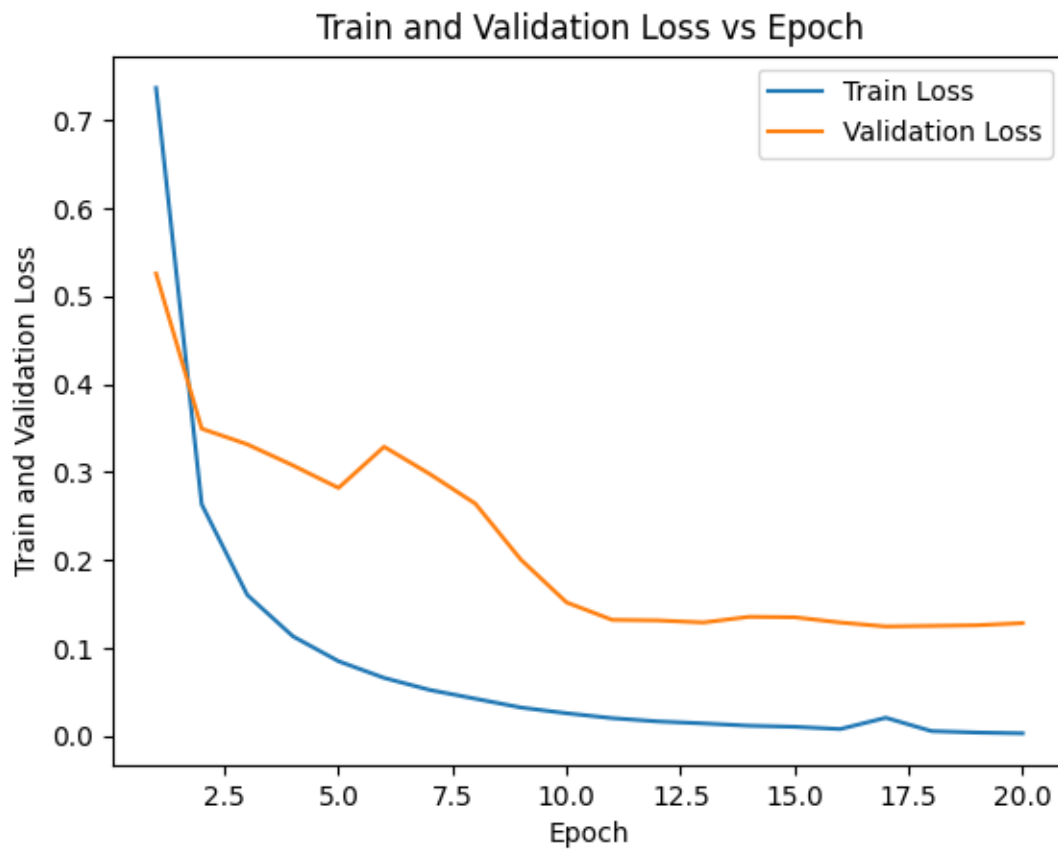
Validation F1 Score Vs Epoch



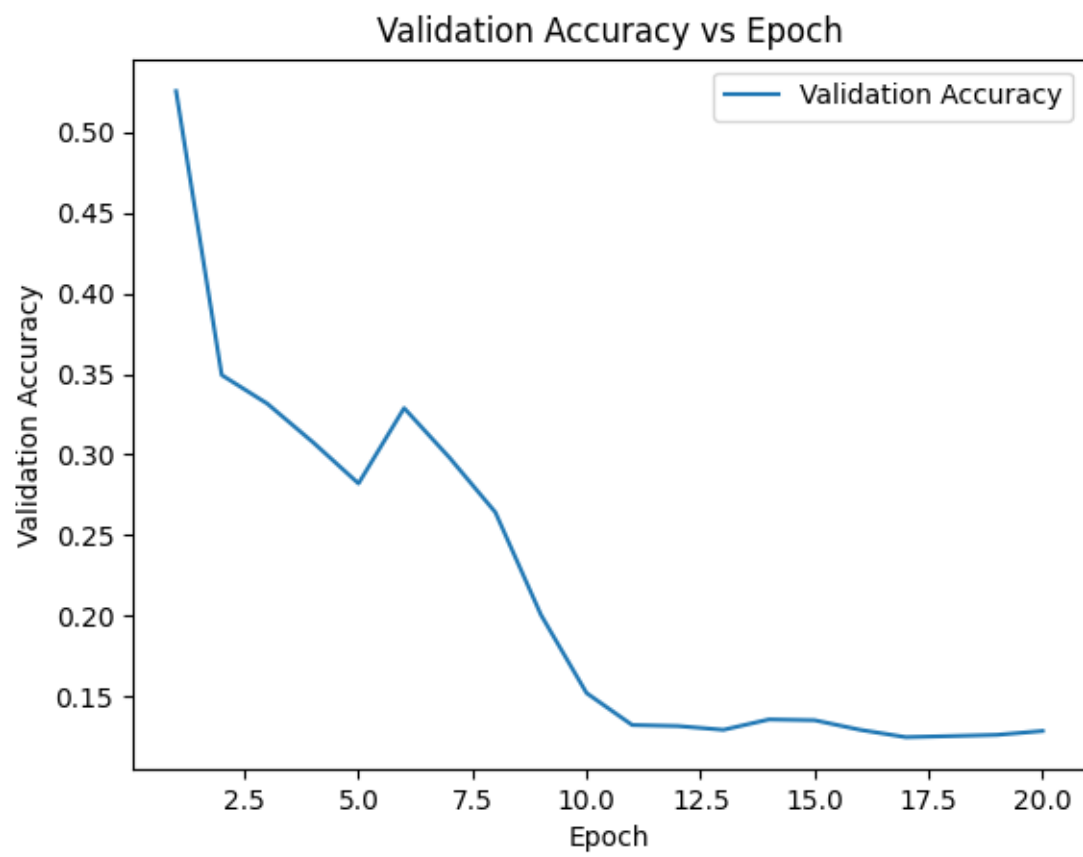
Train Loss, Validation Loss, Validation Accuracy, Validation F1 Score for
Learning rate = 0.01

Epoch	Train_Loss	Validation_Loss	Validation_Accuracy	Validation_F1
1	0.736683	0.525702	0.812992	0.803753
2	0.263469	0.349432	0.874651	0.868425
3	0.160453	0.331648	0.888099	0.883058
4	0.113478	0.307732	0.900787	0.89565
5	0.085188	0.282105	0.912205	0.909106
6	0.066192	0.328907	0.906115	0.900689
7	0.052526	0.297977	0.91728	0.913283
8	0.042546	0.264233	0.926415	0.923553
9	0.032525	0.200554	0.944177	0.94311
10	0.026033	0.152004	0.961177	0.960923
11	0.020469	0.132172	0.965745	0.965688
12	0.016749	0.131532	0.967267	0.967228
13	0.014479	0.129186	0.968536	0.968517
14	0.011873	0.135634	0.969297	0.969226
15	0.010627	0.135134	0.969551	0.969469
16	0.008066	0.129167	0.969551	0.96953
17	0.020927	0.12463	0.969297	0.969339
18	0.005744	0.125317	0.969551	0.96952
19	0.004122	0.126056	0.970058	0.970018
20	0.003249	0.128471	0.970312	0.970273

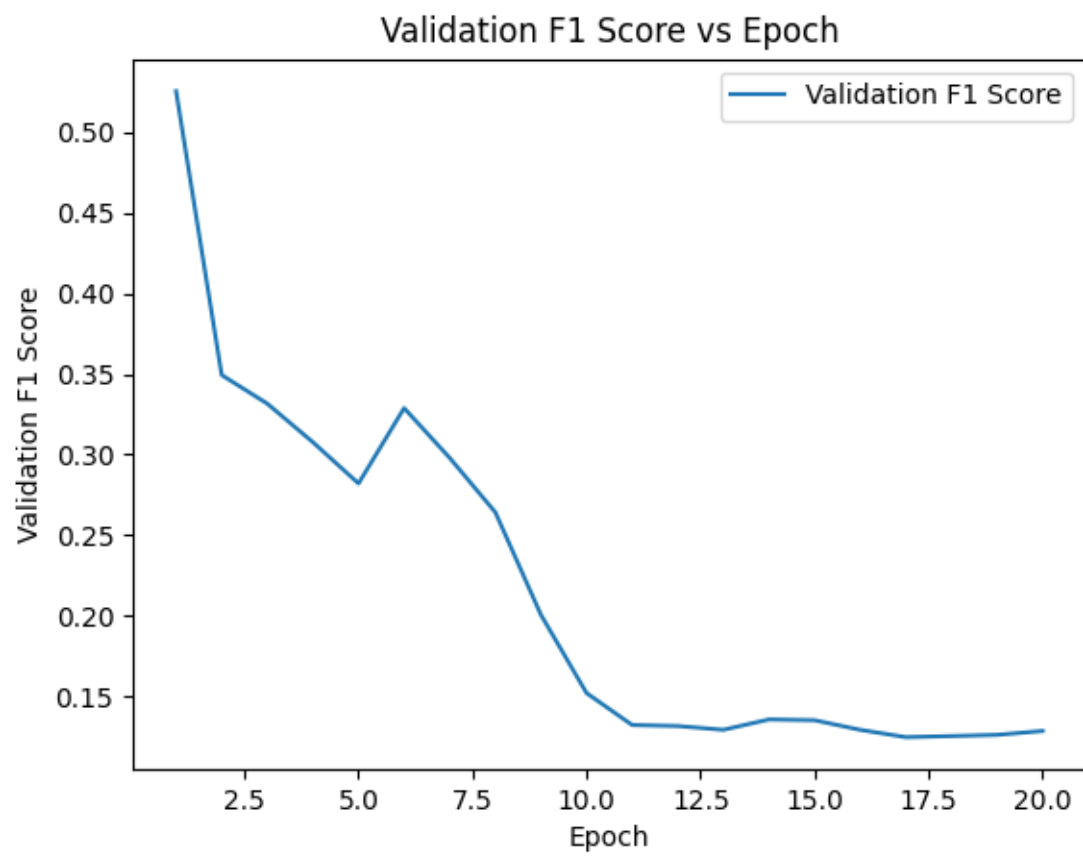
Train and Validation Loss vs Epoch



Validation Accuracy Vs Epoch



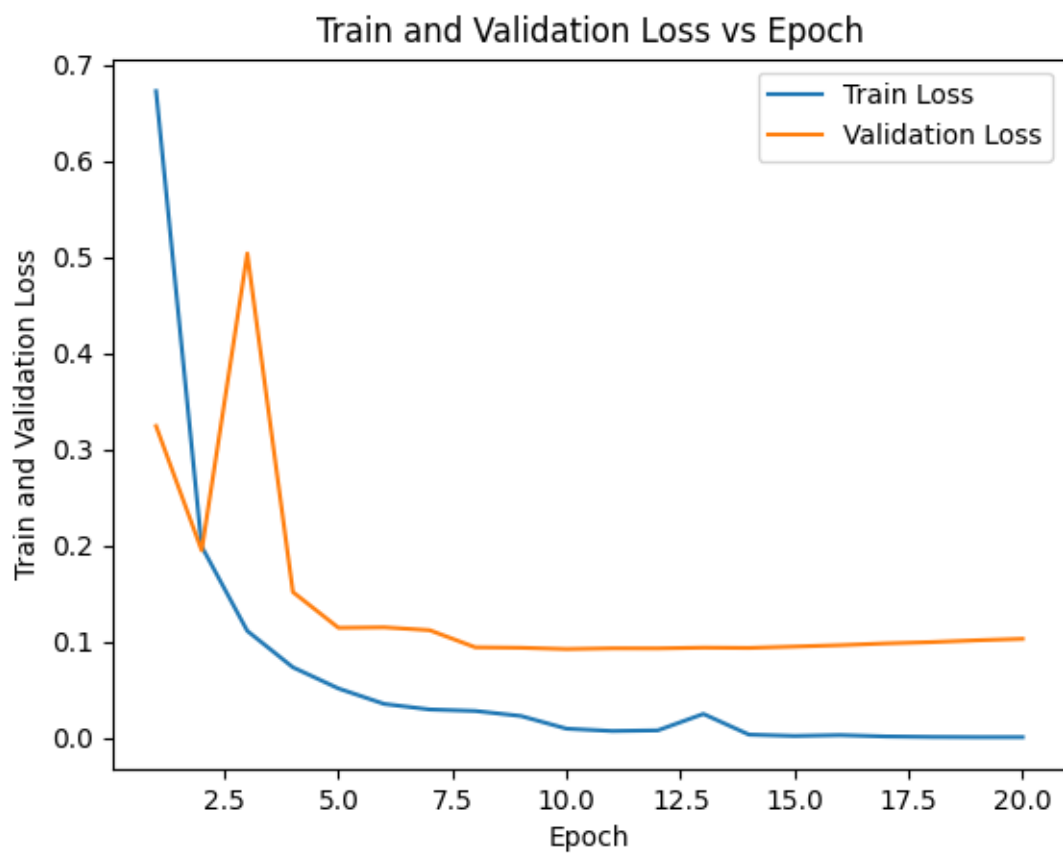
Validation F1 Score Vs Epoch



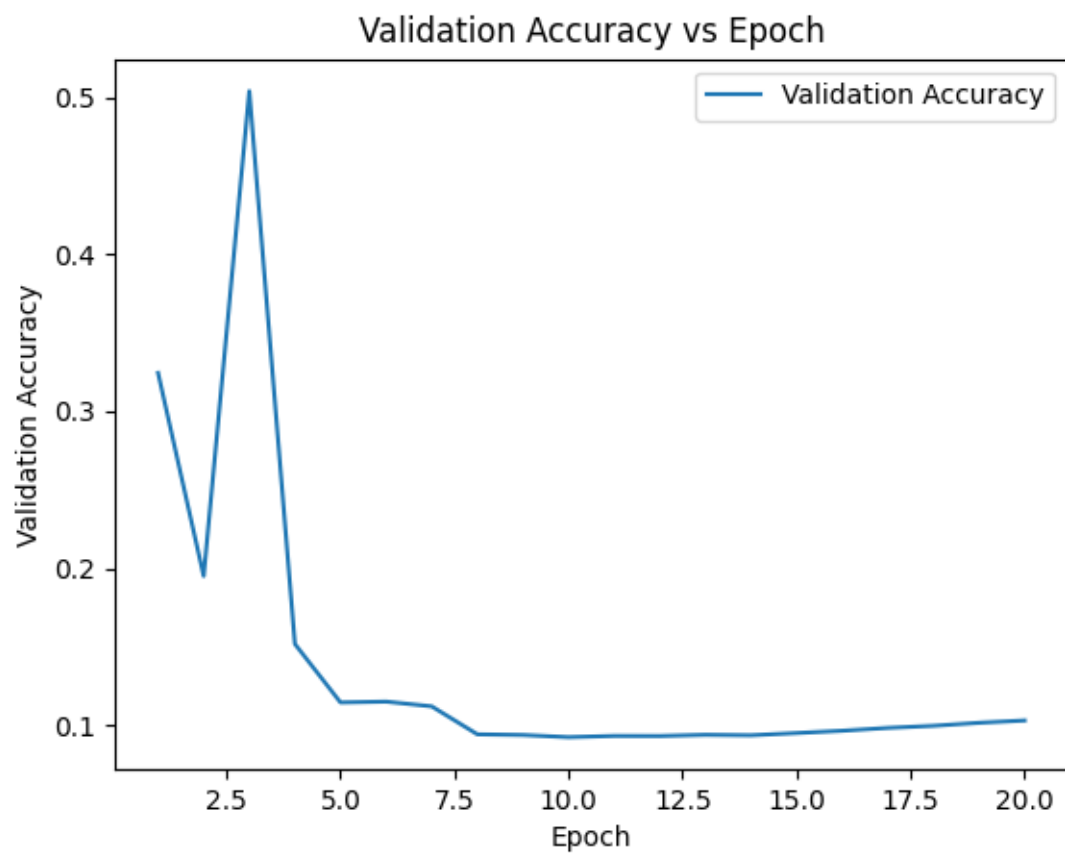
Train Loss, Validation Loss, Validation Accuracy, Validation F1 Score for
Learning rate = 0.02

Epoch	Train_Loss	Validation_Loss	Validation_Accuracy	Validation_F1
1	0.672786	0.324378	0.891144	0.890841
2	0.199085	0.194992	0.933012	0.932541
3	0.111267	0.503849	0.863994	0.852748
4	0.073437	0.151718	0.950266	0.949839
5	0.051402	0.114499	0.965745	0.965613
6	0.035338	0.11502	0.965745	0.965614
7	0.029564	0.112009	0.969297	0.96921
8	0.02802	0.094195	0.973103	0.973064
9	0.022781	0.093765	0.972088	0.972047
10	0.009588	0.092392	0.974879	0.974843
11	0.007172	0.093192	0.974118	0.974068
12	0.007814	0.09314	0.97285	0.972765
13	0.024939	0.093871	0.973611	0.973565
14	0.003396	0.093587	0.976656	0.976642
15	0.002059	0.095	0.976656	0.976643
16	0.002892	0.096461	0.976909	0.976922
17	0.001517	0.098282	0.977671	0.977671
18	0.000995	0.099619	0.977417	0.977415
19	0.000788	0.101537	0.977417	0.97741
20	0.000779	0.103018	0.977163	0.977153

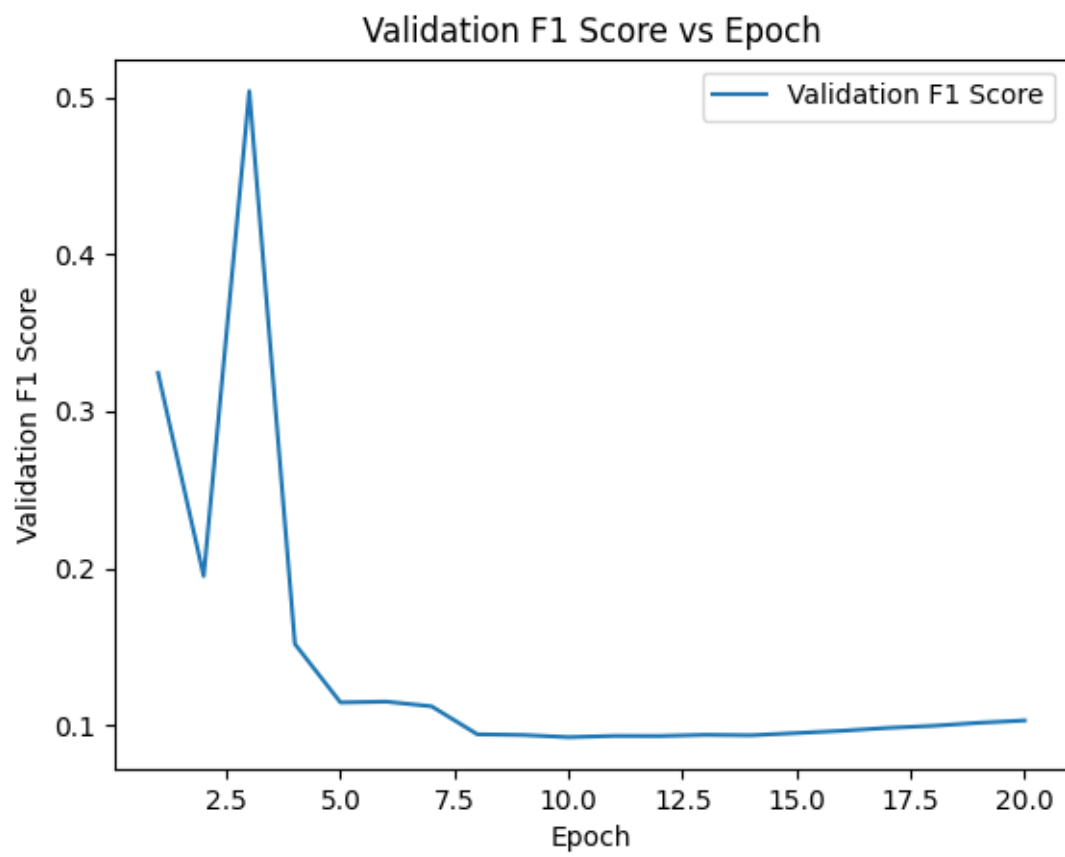
Train and Validation Loss vs Epoch



Validation Accuracy Vs Epoch



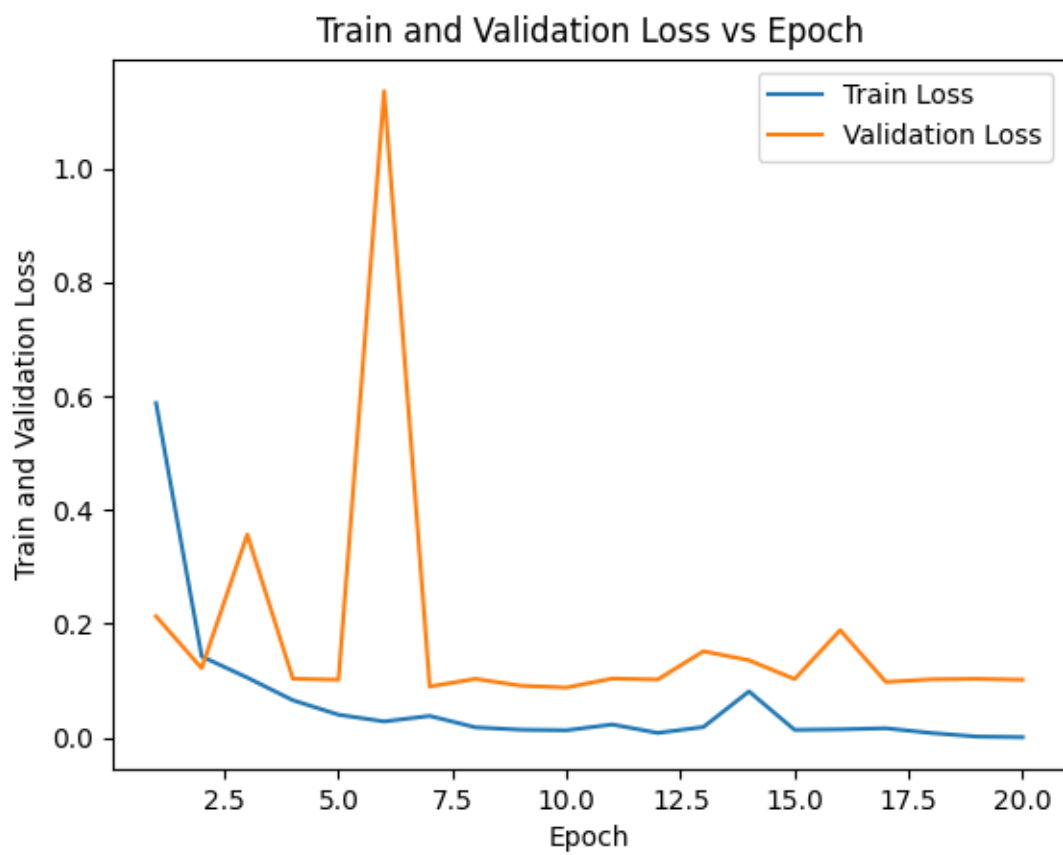
Validation F1 Score Vs Epoch



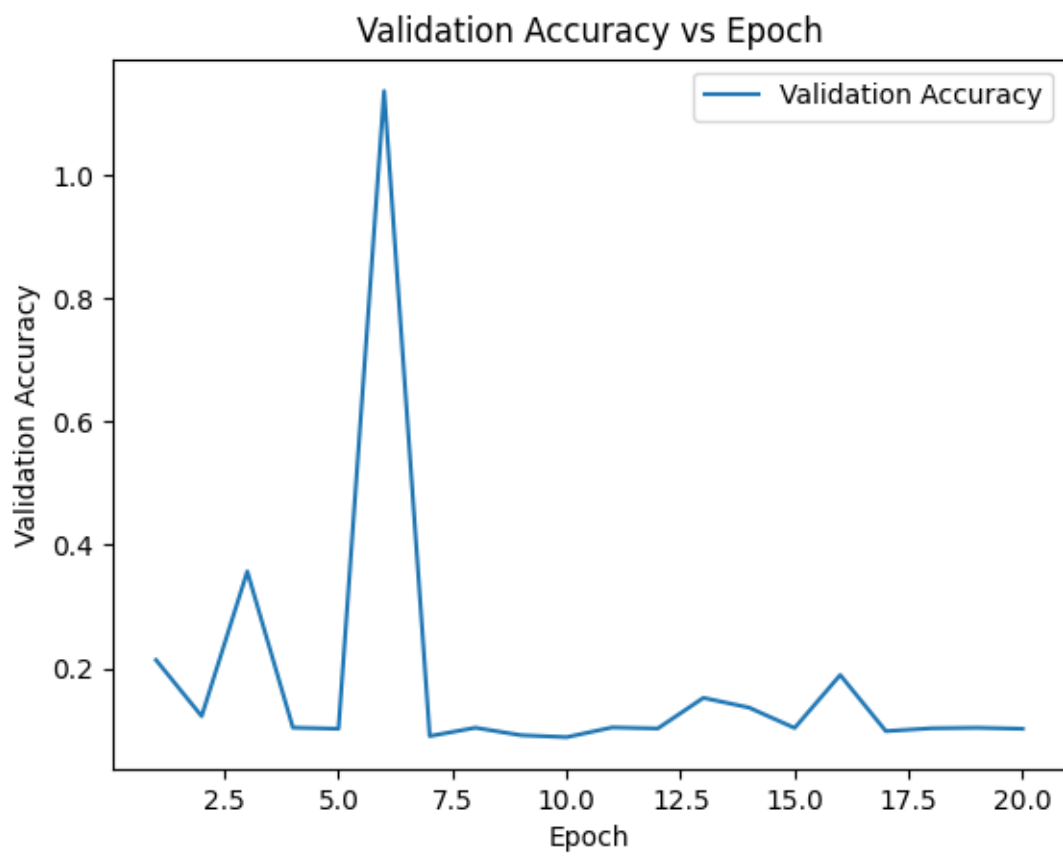
Train Loss, Validation Loss, Validation Accuracy, Validation F1 Score for
Learning rate = 0.1

Epoch	Train_Loss	Validation_Loss	Validation_Accuracy	Validation_F1
1	0.588196	0.213236	0.929713	0.92835
2	0.142653	0.1221	0.961685	0.961445
3	0.105446	0.357022	0.899518	0.898687
4	0.065649	0.103451	0.969551	0.969562
5	0.040223	0.101693	0.974626	0.974637
6	0.028359	1.136601	0.841665	0.828928
7	0.038091	0.089768	0.971581	0.97159
8	0.018009	0.103255	0.977417	0.977417
9	0.013818	0.091207	0.978939	0.978972
10	0.012863	0.088012	0.978939	0.978959
11	0.022995	0.103755	0.974626	0.97463
12	0.008231	0.102107	0.975894	0.975902
13	0.018536	0.151785	0.965745	0.965836
14	0.081197	0.136033	0.967013	0.967018
15	0.013543	0.10289	0.975133	0.975217
16	0.014473	0.188895	0.96067	0.960139
17	0.01638	0.097819	0.975641	0.975577
18	0.008071	0.102413	0.979447	0.979493
19	0.001735	0.103249	0.979701	0.979683
20	0.000771	0.101604	0.981731	0.981754

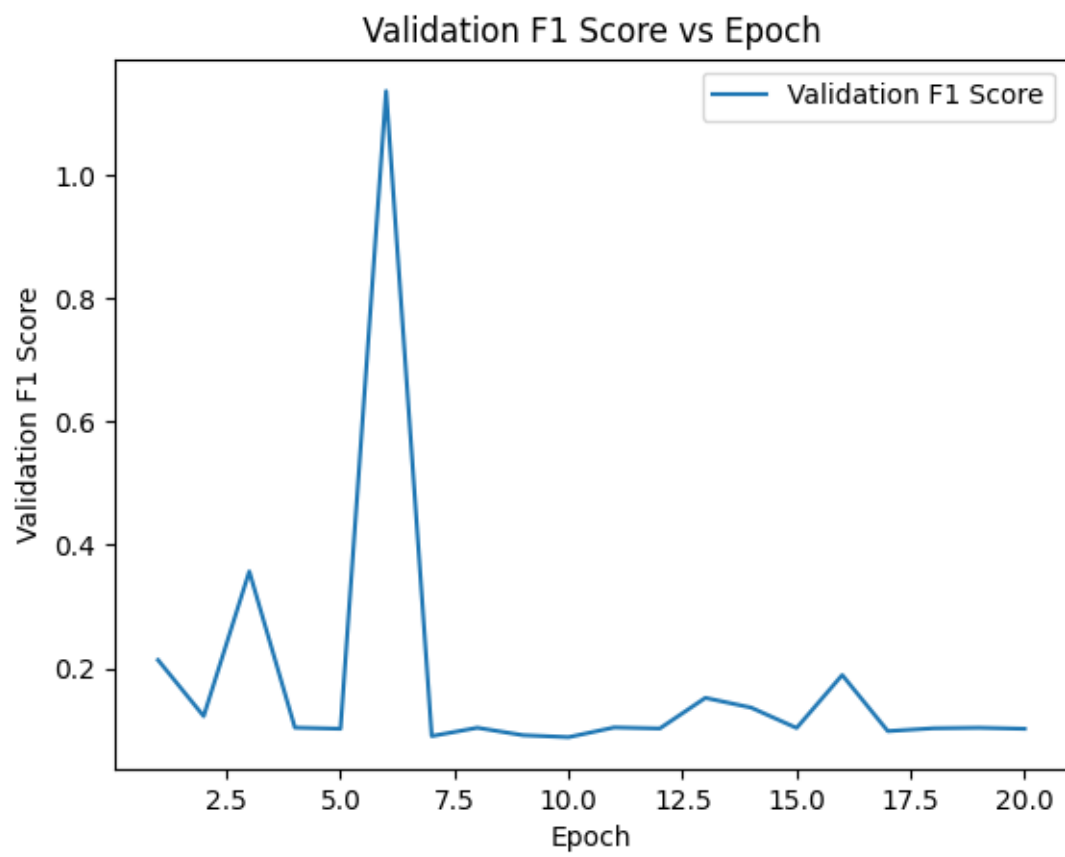
Train and Validation Loss vs Epoch



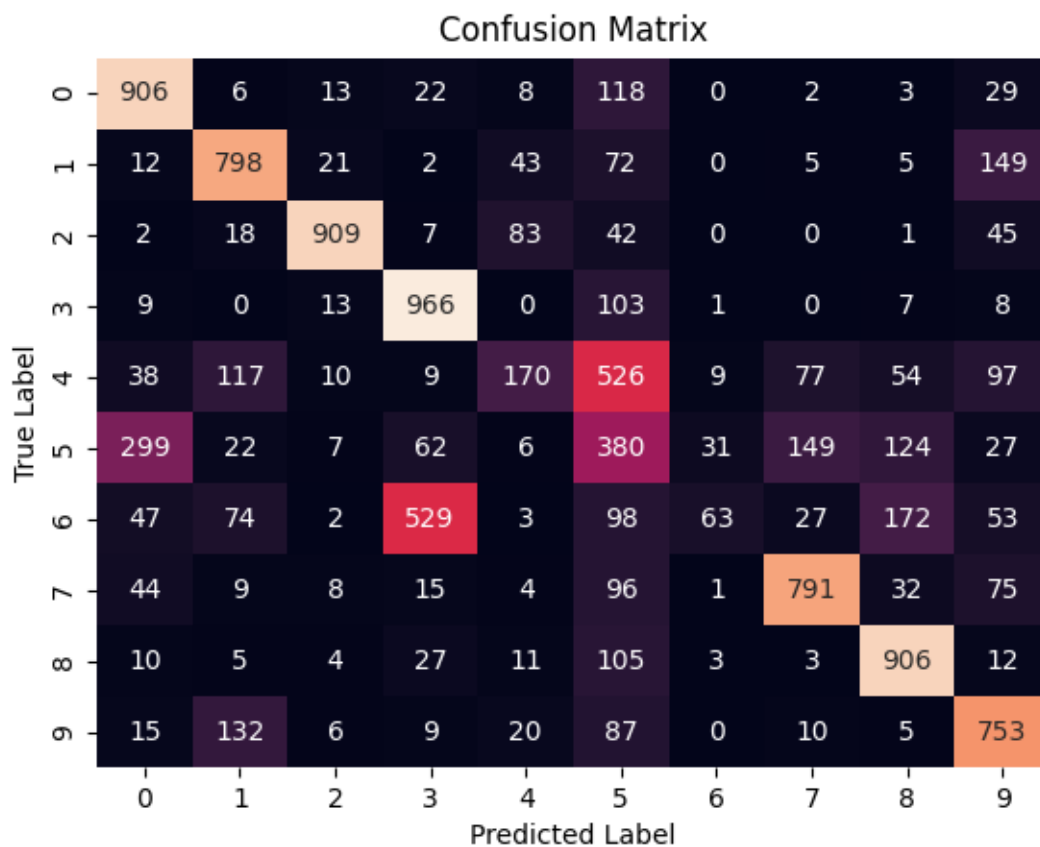
Validation Accuracy Vs Epoch



Validation F1 Score Vs Epoch



Confusion Matrix



Performance on the Test set

Accuracy: 0.6089108910891089

Loss: 1.9972365408630772

F1_Score: 0.5766596284350834