

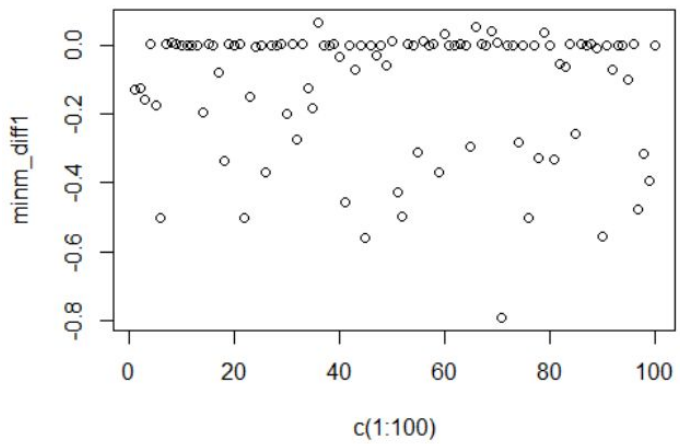


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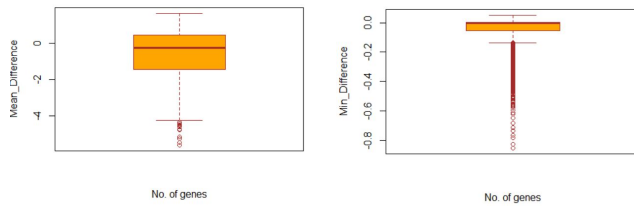
3rd Floor, Rugby Sevens Building, University Stadium
G. C. Narang Road, University of Delhi, Delhi-110007

Project Summary

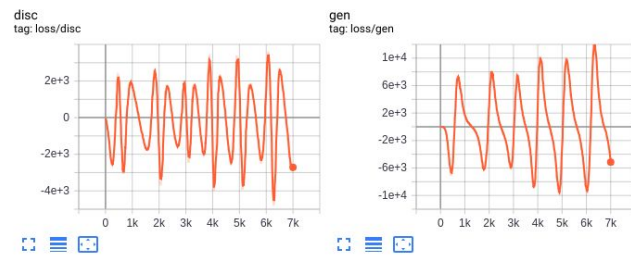
Title of Project	Preterm Birth Prediction
Student's name and course detail	Hardik Kapoor B.Tech Information Technology and Mathematical Innovations
Institute/Company where pursued	Indian Institute of Information Technology Delhi
Project mentor and address	Dr. Tavpritesh Sethi TavLabs, R&D Block Indian Institute of Information Technology, Delhi
Related fields of study	Genetics, Machine Learning, GAN's
Abstract	A basic need in pregnancy care is to establish gestational age, and inaccurate estimates may lead to unnecessary interventions and sub-optimal patient management. The goal of the project was to calculate the gestational age of the fetus using the gene expression of the mother as input during pregnancy. Various machine learning techniques along with generative adversarial networks were used to decrease the RMSE score of the gestational age.
Photographs/ Diagram/Graph/Screen-shots/Table/ Flow-chart/Map/Code etc.	



Difference of mean between generated and input sample
Difference of min(without GA) between generated and input



	0	1	2	3	4	5	6	7	8
0	-0.6213806	-0.41785392	-0.59224695	3.0191143	-0.989922	-0.22982994	-0.98552895	-0.083185755	2.5066423
1	-0.5234825	-0.36308762	-0.5255846	3.120632	-0.82275724	-0.18199494	-0.85955876	-0.17545259	2.397565
2	-0.63607293	-0.41611645	-0.45425922	3.1741152	-0.9473696	-0.27006897	-0.9039981	-0.1708727	2.6564767
3	-0.47912836	-0.45829025	-0.46292835	2.8642213	-0.93391144	-0.19197331	-0.8613334	-0.093280196	1.8912553
4	-0.55864098	-0.47953925	-0.49108788	2.867239	-0.8924406	-0.16615097	-0.95447797	-0.07895294	2.1731563
5	-0.58642477	-0.4010211	-0.5396726	2.8294783	-0.9602693	-0.16467896	-0.8363231	-0.15762417	1.8778101
6	-0.49779674	-0.5651793	-0.41552472	3.1215336	-0.8609544	-0.214985	-0.8595745	-0.20830913	1.9081532
7	-0.5283863	-0.5415549	-0.4802571	2.639032	-0.8812529	-0.15363406	-0.86029476	-0.12997256	2.1960118
8	-0.582017	-0.36560568	-0.4792679	3.4112928	-0.9536436	-0.14828308	-0.8296806	-0.102450274	2.5872421
9	-0.72209066	-0.47538733	-0.4278875	3.1342206	-0.84819996	-0.2092617	-0.84658736	-0.2000405	2.1866825
10	-0.546961	-0.4289138	-0.4820268	2.8370574	-0.838909	-0.17142498	-0.7625317	-0.11239798	1.936617
11	-0.48594537	-0.48163772	-0.4520064	2.7745955	-0.88727075	-0.16442144	-0.8231756	-0.08071747	1.7442892
12	-0.53957623	-0.49299905	-0.45497656	3.2220955	-0.7812568	-0.1621884	-0.8790763	-0.07628363	1.867711
13	-0.5178599	-0.54221684	-0.30323336	3.6824064	-0.9737965	-0.30232227	-0.9415286	-0.19327791	2.154581
14	-0.52362365	-0.49380645	-0.40789816	2.7818193	-0.8422171	-0.14192207	-0.890718	-0.14848435	1.610015
15	-0.60625	-0.53513914	-0.5618435	2.742913	-0.86532253	-0.18369576	-0.86544037	-0.15694526	2.234174
16	-0.49505305	-0.40014848	-0.29050356	3.0626893	-0.7524154	-0.14867425	-0.7725244	-0.10858653	1.9569649
17	-0.5198508	-0.45529008	-0.5103022	2.8419495	-0.82815164	-0.19377248	-0.82616854	-0.10080596	2.1469288
18	-0.6176669	-0.44032517	-0.49474883	3.0606196	-0.901845	-0.17669694	-0.8678318	-0.104649834	1.8655871
19	-0.5599777	-0.4486354	-0.4258723	3.0066621	-0.8549156	-0.24324243	-0.79006904	-0.13711822	2.2929752
20	-0.5916906	-0.57117474	-0.43972778	2.3685203	-0.7981098	-0.1469778	-0.95506716	-0.123178594	1.8145201
21	-0.5193638	-0.4429973	-0.5187195	3.3604717	-0.9392047	-0.15104109	-0.863049	-0.17463739	2.4767084
22	-0.4944187	-0.4191526	-0.52249247	2.878593	-0.8864439	-0.11124142	-0.8320902	0.13405228	2.366626
23	-0.5472731	-0.52289	-0.54310954	3.095491	-0.8647669	-0.08480338	-0.8393286	-0.04328962	1.9681827
24	-0.55614585	-0.5134978	-0.5038297	2.811349	-0.9452653	-0.1523916	-0.91567844	-0.050498605	1.8465843





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