

EDUCATION				
Program	Institution	CGPA/%	Year of Completion	
Dual Degree in Biological Sciences	Indian Institute of Technology, Madras	7.94	2019-2024	
XII (GSEB)	Best High School, Ahmedabad	80%	2019	
X (GSEB)	Best High School, Ahmedabad	87.17%	2017	
SCHOLASTIC ACHIEVEMENTS				
<ul style="list-style-type: none"><li>Only student from 2019 batch to achieve Panasonic Scholarship Program</li><li>Gold Medal for Class Rank 1, cleared 1st Level and secured Int. Rank 3359 in 2nd Level of National Science Olympiad in Class X</li><li>Secured International Rank 859 in International Science Olympiad in Class IX conducted by Science Olympiad Foundation (SOF)</li></ul>				
RELEVANT COURSES AND SKILL				
*Completed Prof. Course, ** Coursera, ***NPTEL				
• Data Structures & Algorithms for Biology*		• Biostatistics*	• Fundamentals of Operation Research*	
• Statistics for Data Science with Python**		• Convolutional Neural Networks**	• Introduction to DL & NNs with Keras **	
• Introduction to Machine Learning***		Programming Languages: C, basic SQL, Python, React, React Native   Hackathons   Univ.Ai		
WORK EXPERIENCE				
Data Science Intern at FN MathLogic Consulting Services, Gurgaon			May'23 – July '23	
Developing a Conversational Question Answering System using Large Language Models (LLMs)				
<ul style="list-style-type: none"><li>Explored LLM memory retention via various model finetuning methods and Langchain framework on ICICI Lombard Policy QnA data</li><li>Implemented Transfer Learning on Microsoft's DialoGPT model which was able to retain chat memory for 4-5 conversations</li><li>Achieved 60% ROUGE SCORE on DialoGPT also used Reinforcement Learning from Human Feedback method with GPT gave 25% rouge score</li></ul>				
Document Parsing for Question Answering using LLMs with Langchain framework				
<ul style="list-style-type: none"><li>Transformed ICICI Lombard policy docs into chunks, each were converted to embedding from LLM or encoder-only model's embedding</li><li>Used Langchain to retrieve top k similar document chunks to user's query. These are given with prompt to LLM for answer generation</li><li>Utilized Flan-T5 model as LLM and embeddings from encoder-only model of HuggingFace platform led to 30% rouge score</li></ul>				
Machine Learning Intern at Street Style Store Company, Delhi			May'22 – Aug'22	
<ul style="list-style-type: none"><li>Worked on Classification of the conversation between a user and agent about progress of online order to improve user experience</li><li>Utilized N-grams stored as Bag of Words &amp; compared Recall values for SVM model that achieved a 96.4% accuracy on the test dataset</li></ul>				
Data Science Intern at Supratech Lab, Gujarat			Nov'21 – Dec'21	
<ul style="list-style-type: none"><li>Identified crucial biomarker genes for IVF that enabled successful implantation, enhancing the effectiveness of IVF treatments</li><li>Employed PCA &amp; t-SNE for dimensionality reduction &amp; conducted T-test calculating P values that reduced 57k GeneIDs features to 6k</li><li>Used Feature Importance function of Random forest on data and trained XGBoost model that achieved 82% test accuracy</li></ul>				
RESEARCH EXPERIENCE				
ML Research Intern IIT Varanasi Research Paper June'21 – July'21	Machine Learning for Milk Foam Analysis, Guide: Prof. Abhishek Dhoble			
	<ul style="list-style-type: none"><li>Worked on Classification of Surfactants to study milk foam quality as demand for Cappuccino foams has increased</li><li>Randomforest achieved 0.955 roc-auc score &amp; 88.1% test accuracy, also applied algorithms eg SVM, XGBoost etc</li><li>Explored Casein reaction with surfactants, this study also got published as the research paper in Springer Nature</li></ul>			
DDP PROJECT IIT Madras July'23- Ongoing	Evaluating ML models for Chest X-ray of Diseases, Guide: Prof. Ganapathy Krishnamurthi			
	<ul style="list-style-type: none"><li>Applied Transfer Learning on Ensemble of CNN models the chest x-ray images of Pneumonia and Normal person</li><li>Implemented Image Data Generator for increasing training data to avoid overfitting &amp; obtained 93.7% accuracy</li></ul>			
COURSEWORK				
EddyNet: For Pixel-Wise Classification of Oceanic Eddies, [OE5015: Machine Learning for Ocean Engineers]				
<ul style="list-style-type: none"><li>Classified sea surface height maps using EddyNet, comprising convolutional encoder-decoder U-Net and a pixelwise classification layer</li><li>For multiclass classification used one-vs-all soft dice loss. Accuracy from Dice Loss is 89.08% and Categorical Cross Entropy gave 90.61</li></ul>				
Monte Carlo Simulation [BT 2042: Fundamentals of Biophysical Chemistry]				
<ul style="list-style-type: none"><li>Observed polymer assemblies using Monte Carlo Metropolis criterion in matlab at different interaction energies between atoms</li><li>When interaction energy is low the polymer formed aggregate. When only some atoms can interact then polymer had more energy</li></ul>				
PROJECTS				
Stocks & Crypto Currencies Price Prediction Using LSTM				
<ul style="list-style-type: none"><li>Developed Long Short-Term Memory (LSTM) models with Keras to predict Closing price values based on over a decade of trade data</li><li>While training, past 19 days values used as input to predict next day's value. Achieved mean squared error (MSE) of 0.465 on testdata</li></ul>				
Netflix Movies and TV Shows Recommendations				
<ul style="list-style-type: none"><li>Developed Recommender System using Content based method for Netflix movies and TV shows recommendations</li><li>Also provided recommendations for books using LightFM hybrid recommender which incorporates both item and user metadata</li></ul>				
Quora Question Pairs				
<ul style="list-style-type: none"><li>Examined whether the questions in each pair are similar or not by calculating cosine similarity between the questions</li><li>Used GloVe embeddings, tf-idf and doc2vec vectorizer that achieved maximum accuracy of 66% in latter two methods</li></ul>				
POSITION OF RESPONSIBILITY				
Computer Vision & Intelligence Club Project Member, Shaastra 2022			June'21 – April'22	
<ul style="list-style-type: none"><li>Worked on YOLO v5 model for detecting circuit components and the mAP score of the model evaluated with 25 images is 92.7%</li><li>Detected terminal points, nodes in circuit using BFS algorithm and generated netlist about connectivity of components with others</li></ul>				
Biogen Super Coordinator, Shaastra 2022			July'21 – Jan'22	
<ul style="list-style-type: none"><li>Supervised all the coordinators in theme ideation &amp; related events to be organized related to biotechnology under the Biogen Team</li><li>Collaborated with other teams of Shaastra which help organizing event and also assist them with the publicity of the event</li></ul>				
Public Relations Volunteer, Shaastra 2020			Sept'19 – Feb'20	
<ul style="list-style-type: none"><li>Reached out to various social media accounts as a part of PR activity for our social campaign named "BLINK ".</li><li>Planned and executed "Walk in the Dark" and various activities for our stall at KV ground and spread campaign motto</li></ul>				
EXTRA-CURRICULAR ACTIVITIES				
Sports	<ul style="list-style-type: none"><li>Selected for NSO Fitness program and also participated in Samanvay Marathon 2019</li></ul>			