

ACADEMIC DETAILS

Degree	Specialization	Institute	Year	CPI/%
B.Tech.	Computer Science and Engineering	IIT Gandhinagar	2022-2026	9.45
Class XII	Physics, Chemistry, Maths	Dr. Kitchlu Public School, Moga (CBSE Board)	2020-2022	99.4
Class X		Sacred Heart School, Moga (ICSE Board)	2006-2022	98.6

PROJECTS

- **Sparsifying Networks while Preserving Communities** [Apr '24]

(Prof. Anirban Dasgupta, IIT Gandhinagar) | [Project Link](#)

- Implemented several graph sparsifying techniques by edge sampling including edge betweenness based sampling, effective resistance based sampling, and global and local edge similarity based sampling.
 - Leveraged the NetworkX and CDLib libraries to extract out the community structures out of the sparsified graphs and compared the quality of these communities with other baseline sampling techniques.
- **Text Generator based upon next character prediction from an MLP** [Mar '24]

(Prof. Nipun Batra, IIT Gandhinagar) | [Project Link](#)

- Developed a pipeline model for next character prediction based on the context of previous k characters.
 - Trained models on several corpora like Gulliver's Travels, English Wikipedia 8, Atomic Habits, Tolstoy's Essays, Alice in the Wonderland with varying embedding size of the vocabulary.
 - Deployed a Streamlit application with all the trained models to allow the user to select various hyperparameters graphically.
- **Child Safety Monitoring App using MATLAB's Simulink Support Package for Android** [Aug '23 - Nov '23]

(Prof. Nithin V. George, IIT Gandhinagar) | [Project Link](#)

- Designed and implemented an Android app for a smart bicycle equipped with embedded hardware sensors (gyro-scope, accelerometer, GPS) built into child's android device to monitor the child's safety during cycling.
 - Leveraged Simulink Support Package for Android Devices along with the TCP/IP models for efficient data transmission and communication between the cycling device and the parent's device.
- **Analysis of Datasets using Probability, Machine Learning, and Statistics** [Jan '23 - April '23]

(Prof. Shanmuganathan Raman, IIT Gandhinagar) | [Project Link](#)

- Implemented statistical and probabilistic analysis on several datasets including the American College Data (AAUP and US News), Goodreads Books, and the 2013 Grand Slam Tennis.
 - Uncovered critical insights through advanced data manipulation and visualisation techniques using Python libraries such as NumPy, Seaborn, Plotly, Pandas, Scikit-Learn.

TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, Verilog.

• **Tools:** Xilinx Vivado, L^AT_EX, Git, Arduino UNO, Autodesk Fusion 360, Autodesk Inventor, Laser Cutting.

• **Libraries:** PyTorch, Tensorboard, NumPy, SciPy, Pandas, Plotly, Matplotlib, Seaborn, Scikit-Learn, Streamlit, NetworkX, CDLib, PyVis, OpenCV, TSFEL, SFML (C++).

ACHIEVEMENTS

- Presented with the **Award for Academic Excellence** for highest CPI in the batch for the AY 2022-23.

• Secured a grade of **A+ (11/10)** for outstanding performance in the courses **Calculus of Single Variable and Linear Algebra** and **Principles and Applications of Electrical Engineering**.

• Felicitated with **Dean's List Award** IITGN for **Semester I, II, IV** for excellent academic performance.

• Secured **2nd Position** in the Machine Learning challenge at IITGN's Annual Hackathon - **HackRush 2023**.

• Secured an All India Rank of **1297** in the Joint Entrance Exam (Advanced).

• Recognised as a **KVPY** (Kishore Vaigyanik Protsahan Yojana) Scholar with All India Rank **1402**.

POSITIONS OF RESPONSIBILITY

- **Core Committee Member, Amalthea '23 - IIT Gandhinagar's Annual Technical Summit** [April '23 - Feb '24]

- Successfully managed two teams: **Finance and Design**
 - Managed the financial aspects of the entire summit, prepared the budget, tracked expenses, and maintained financial stability throughout the summit.
 - Worked closely with the Design team of 25 members to develop creative visual assets, including branding materials and visual presentations that enhanced the overall experience of the summit both at the IITGN Campus and Sabarmati Riverfront, Ahmedabad.
- **General Member, Technical Council, IITGN** [May '23 - April '24]

- Contributed to IIT Gandhinagar's own centralized hub and interactive platform for students - **metaiitgn**.