

## ACADEMIC DETAILS

Year	Degree	Institute	CGPA/Percentage
2018-Present (Current)	B.Tech in Computer Science and Engineering	Indian Institute of Technology Delhi	9.246/10
2018	Class XII, CBSE	Aklank Public School, Kota	92.6%
2016	Class X, CBSE	Shree Vallabhacharya International School, Rajkot	10/10

## SCHOLASTIC ACHIEVEMENTS

- Secured a perfect **10 SGPA** in second semester 2018-19 and was awarded **Certificate of Merit** for being in **Institute Top 7%** amongst 900 students in semester II
- All India Rank 83** in Joint Entrance Exam-Advanced -2018 among 231,000 candidates
- All India Rank 132** in Joint Entrance Exam-Mains -2018 among 1.15 million candidates
- Qualified **National Standard Examination in Chemistry(NSEC)** in the year 2018 being among the top 1% of the country.

## PROJECTS

### Air Pollution Measurement by Mobile Agents

Prof. Sayan Ranu, Dec-2019 - Ongoing

- A particular city is modeled as an affinity graph of locations and the measurements made by mobile agents are collected.
- The measured data has high spatial measurement density and is organized as a matrix (incomplete).
- A Variational Graph Autoencoder is used in order to generate the data and complete the matrix.

### Modeling Global Warming

Independent Project, May 2019 - July 2019

- Created a statistical model to analyze and visualize climate change in terms of temperatures of cities over a period of time.
- Considered different ways to make the data less noisy and obtain clearer temperature change trends.
- Tested different models to see how well historical data can predict future temperatures.

### Modeling Triangulation

Prof. Subodh Kumar, Oct 2019 - Nov 2019

- Designed and implemented a Java model for Triangulation using Graphs for 3D coordinates of the vertices of triangles.
- Checked for the completeness of the tiling, boundaries for incomplete tiling and other details using different graph algorithms.

### Analysis of Different Database Implementations

Prof. Subodh Kumar, Aug 2019 - Oct 2019

- Implemented a database using different data structures such as Linked List, Trie, Red Black Tree, Hashing, and Heaps.
- Analysed the relative efficiency of different data structures by comparing time and space complexity of various operations.

### Displaying Text in Air

Prof. Anshul Kumar, Oct 2019 - Nov 2019

- Different LEDs of an LED array light up corresponding to the characters of the entered text. Due to persistence of vision, the text appears to be displayed in air when the LED array is moved.
- Designed and implemented UART and an FSM for the above in VHDL on Vivado.
- Tested the VHDL code and demonstrated the system on an LED array using BASYS-3 XILINX FPGA board (Artix-7).

## COURSES

**Institute Courses:** Probability and Stochastic Processes, Data Structures and Algorithms, Discrete Mathematical Structures, Digital Logic and System Design, Computer Architecture\*, Programming Languages\*, Design Practices\*, Introduction to Economics\*, Linear Algebra, Calculus, Introduction to Computer Science  
\* denotes courses to be completed before summer 2020.

**Online Courses:** Intro to Machine Learning (Kaggle micro-course), Introduction to AI (University of Helsinki AI101), Introduction to Computational Thinking and Data Science (MIT 6.0002), Multithreading in Java(Udemy)

## TECHNICAL SKILLS

Python, Java, C++, HTML/CSS,  $\text{\LaTeX}$ , Git/Github, VHDL

## EXTRA CURRICULAR ACTIVITIES

- Executive** at ACES ACM IIT Delhi, the departmental society of Computer Science and Engineering.
- Represented hostel in Inter Hostel Badminton tournament.
- Student volunteer at National Service Scheme IIT Delhi.