

# Nivedit Jain

Sophomore year (B.Tech.) | Computer Science and Engineering | IIT Jodhpur  
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## EDUCATION

### UNDERGRADUATE

INDIAN INSTITUTE OF TECHNOLOGY  
(IIT), JODHPUR, INDIA  
B.Tech, Computer Science and  
Engineering  
Expected May 2022  
Cum. GPA: 8.9

### SENIOR SECONDARY SCHOOL

NIRMAL ASHRAM DEEPMALA  
PAGARANI PUBLIC SCHOOL,  
RISHIKESH, INDIA | CBSE  
Computer Science Stream  
Grad. May 2018  
Percentage: 92

### SECONDARY SCHOOL

NIRMAL ASHRAM DEEPMALA  
PAGARANI PUBLIC SCHOOL,  
RISHIKESH, INDIA | CBSE  
Grad. May 2016  
Cum. GPA : 10.0 / 10.0

## COURSEWORK

### UNDERGRADUATE

- Data Structures And Algorithms
  - Discrete Mathematics
  - Theory Of Computation\*
  - Calculus and Linear Algebra
  - Complex Analysis and Differential Equation
  - Probability, Statistics and Random Processes\*
  - Computer Organization and Architecture\*
  - Digital Logic and Design
  - Software Engineering
  - Signal and Systems
- \* ongoing

### MOOC

- Graph Theory
- Machine Learning
- Mathematical Optimization

## SKILLS

### LANGUAGES

- Python
- C/C++
- JavaScript

### OPTIMIZER

- CPLEX

### OTHERS

- $\LaTeX$
- Linux
- Git and Github

## PUBLICATIONS

**MAXIMUM WEIGHTED EDGE BICLIQUE PROBLEM ON BIPARTITE GRAPHS**  
CALDAM 2020 : Sixth International Conference on Algorithms and Discrete Applied Mathematics ( See Paper)

## INTERNSHIPS

**MATHEMATICS DEPARTMENT IIT ROPAR | GUIDE - DR. ARTI PANDEY**

### CARPPOOL TEAM GENERATOR

May 2019 - June 2019

- Developed and deployed a Carpool team generator system for Chandigarh City
- Modelled on integer programming and used IMB CPLEX as a solver in Python.

### MAXIMUM WEIGHTED EDGE BICLIQUE PROBLEM

June 2019 - July 2019

- Worked on problems related to bipartite graphs, cliques and biclique detection.
- Proved the problem of maximum biclique detection to be NP Complete even when input itself is a biclique and developed an algorithm to find maximum weighted clique in Chain Graphs

## PROJECTS

### CC BASKET - ONLINE DELIVERY SYSTEM

October 2019 – December 2019 | Guide - Dr. Anand Mishra | IIT Jodhpur

- Made a terminal based online delivery system with all features like email verification, phone number verification, emailing, etc for community center of IIT Jodhpur.
- Awarded highest grades and selected among top 3 projects showcased on course website.
- Developed in C++ using principles of Object Oriented Design and Analysis.

### MUSIC GENRE CLASSIFIER

October 2019 – December 2019 | Guide - Dr. Rajlaxmi Chouhan | IIT Jodhpur

- Classified input music audio signal into 10 genre classes, implemented "Musical genre classification of audio signals" by G. Tzanetakis and P. Cook.
- Experimented with CNNs and KNNs to achieve an accuracy of 84%.
- Implemented in Python (iPython Google Colab) using Keras and Scikit-learn.

## ACADEMIC ACHIEVEMENTS

- Holds a perfect (10/10) Cum GPA in Mathematics Courses and a Cum GPA 9.54/10 in Computer Science Courses.
- Presented my research work of first year summer internship at CALDAM2020 at Indian Institute of Technology Hyderabad on 14th Feb 2020
- Successfully competed with 10,43,000 eligible students in Joint Entrance Examination 2018 to secure a rank of 2824.
- Ranked among top 100 in Mathematics in India in entrance exam for Indian Statistical Institute.
- Won Bronze Medal in Inter IIT Tech Meet in Bosch Route Optimization Challenge.
- State Rank 2 for continuously 3 years in Maths Wizzes organized by DPS Ranipur
- Was chosen as the 'Best Academician' continuously from class 9th to 12th.

## EXTRACURRICULAR

- Founder and Coordinator, Eros Discrete Mathematics Research Group, IIT Jodhpur
- Founder Mathrithms, open source mathematics library development.
- Marketing Head, Aaftab 2019, Literature Fest, IIT Jodhpur
- Vice Captain, Literature Club, IIT Jodhpur
- Represented IIT Jodhpur in Parliamentary Debate at Inter IIT Cultural Meet 2018
- Helped in organizing IdeaSpark 2019, Annual Entrepreneurship Fest, IIT Jodhpur
- Active Member Placement Cell, Entrepreneurship Cell, Programming Club, Pheme (Newsletter Club)