



Aryan Gupta
 UG (IV Year II Semester)
 Integrated M.Tech. Geological Technology
 Contact No: 9350046597
 Email: aryan_g@es.iitr.ac.in
 Registration No: 19410006/2023



Area of Interest

Competitive Programming, Data Structures and Algorithm, Machine Learning, Planetary Geosciences

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2023	Int. M.Tech 4th Year	Indian Institute of Technology, Roorkee	8.591
2019	Intermediate (Class XII)	The Century School, Gharaunda, Karnal(CBSE)	91.80 %
2017	Matriculate (Class X)	Pratap Public School, Sector 6, Karnal (CBSE)	10.000

Internships

Research Intern | Department Of Hydrology, IIT Roorkee June 2021 - August 2021

- Worked on a project named "Climate Change Analysis in India" which has a dataset of 23k+ points consisting maximum and minimum temperature and precipitation values from the year (1951-2014)
- Wrote 9 precipitation and 10 temperature parameters using numpy and pandas for future climate change analysis
- Built a function to visualize and interpret the data using geographical maps of India of different parameters using matplotlib to give a better understanding

Projects

Text compression using Huffman Coding Algorithm | ACM Student Chapter, IIT Roorkee October 2022 - December 2022

- DOMAIN- Data Structures and Algorithm
- Analysis and implementation of HUFFMAN algorithm for data compression
- Applied on text files, implemented using C++

Data Structures And Algorithms | ACM Student Chapter, IIT Roorkee May 2022 - July 2022

- Flight Trip Planner: Implemented Dijkstra Algorithm to plan a flight trip involving layover time from one city to another
- Anagram Generator: Generated all anagrams of a word by combining 1-2-3 words of dictionary using double hashing and backtracking

Salvos-Landslide Management Game | ACM Student Chapter, IIT Roorkee December 2021 - January 2022

- DOMAIN - Game Development
- Desktop game for disaster management training of children
- Implemented in UNITY game engine

Geological Field Training | Indian Institute of Technology, Roorkee April 2022

- Manual calculations of the Strike and Dip of faults, folds, and lineations of the exposed rocks
- Used tools like Brunton compass and GPS for calculations, in the Haridwar and Rishikesh region
- Studied Himalayan geology, and tectonic subdivision and examined different geological features and outcrops in the Lesser Himalayan, the upper Siwalik region of Rishikesh, and adjoining areas
- Detailed analysis of sandstone, conglomerate, limestone, and dolomite rocks was done which was in present in Haridwar and Rishikesh region

Climate Change Variation in India | Indian Institute of Technology, Roorkee June 2021 - August 2021

- Worked on a dataset having 23k+ points which consists of maximum and minimum temperature and precipitation values from the year (1951-2014)
- Calculated 9 precipitation and 10 temperature parameters using numpy and pandas for future climate change analysis
- Visualized and interpreted the data using geographical maps of India of different parameters using matplotlib to give a better understanding
- Applied Machine Learning algorithms like linear regression, ANN to project the future parameters with 75% accuracy

Awards / Scholarships / Academic Achievements

- Secured a Global Rank 1123 (Div 2) and 1172 (Div 2) on the Codeforces platform among 25000+ candidates participating
- Secured a Global Rank 46(Div 3) and 181 (Div 2) on the Codechef platform among 20000+ candidates participating
- Global Rank 10 in Codechef May Long Two 2022 (Div 3)
- Global Rank 46 in Codechef Starters 42 (Div 3)
- Global Rank 191 in Codechef Starters 43 (Div 2)
- Global Rank 222 in Codechef Starters 45 (Div 2)
- Global Rank 1386 in Codeforces Round 803 (Div 2)
- Global Rank 1457 in Codeforces Round 773 (Div 2)
- Global Rank 1532 in Educational Codeforces Round 131 (Div 2)
- Global Rank 1748 in Codeforces Round 794 (Div 2)
- Global Rank 1776 in Codeforces Round 797 (Div 3)
- Global Rank 1786 in Codeforces Round 780 (Div 3)
- Recognized as 'Notable participant' in IITB-ISRO-AICTE Mapathon, December 2019
- AIR-8852 in JEE Advanced 2019
- AIR-13697 in JEE Mains 2019

Skills

Computer languages	C++, Python
Software Packages	Sublime, Spyder, Dev C++, Google Colab, Numpy, Pandas, Matplotlib, Microsoft Office, MATLAB
Additional Courses	Machine Learning Onramp (Mathworks), Economics (HSS Elective), Planetary Geosciences(Department Elective), Python and OOP Concepts (ib hubs), Ethics and Self Awareness, Statistics 110 (Harvard University)
Languages Known	English(SRW), Hindi(SRW)

Positions of Responsibility & Extra Curriculars

Executive Member | Cognizance, IIT Roorkee November 2020 - October 2021

- Planned, strategized and hosted IDEAZ event in cognizance 2021 which saw a huge amount of participation
- Overlooked a team of 30+ students from 2 different states for the effective promotion and execution of the fest

Undergraduate Teaching Assistant (UGTA) | IIT Roorkee December 2020 - July 2021

- Mentored a batch of 50+ students through the course of MAN-001 (Linear Algebra) and MAN-004 (Numerical Methods)
- Conducted regular online doubt sessions and practice exams and served students with course material

Head, Events and Operations | Academic Reinforcement Program, IIT Roorkee July 2021 - June 2022

- Initiated various events like placement/internship blog series, exploring the R-land and collaborated with various skill developing agencies to organize regular tests and webinars
- Involved in operational work such as coordinating teaching assistants, more than 1000 first yearites, events works

Participant | Competitive Programming December 2021 - Present

- Active Member on various online judges including Codechef and Codeforces
- Codeforces maximum rating of 1545 (Specialist) :- Handle: El.Profesor
- Codechef maximum rating of 2016 (5 Star):- Handle: aryangupta1610

Head Events | Academic Reinforcement Program, IIT Roorkee July 2021 - June 2022

- Initiated various events like placement/internship blog series, exploring the R-land and collaborated with various skill developing agencies to organize regular tests and webinars
- Involved in operational work such as coordinating teaching assistants, more than 1000 first yearites, events works
- Supervised my whole team and keep them motivated for future endeavors

Executive Member | Cognizance, IIT Roorkee November 2020 - October 2021

- Planned, strategized and hosted IDEAZ event in cognizance 2021 which saw a huge amount of participation
- Overlooked a team of 30+ students from 2 different states for the effective promotion and execution of the fest
- Maintained a database of more than 50k students throughout India and some foreign countries

Undergraduate Teaching Assistant (UGTA) | IIT Roorkee December 2020 - July 2021

- Mentored a batch of 50+ students through the course of MAN-001 (Linear Algebra) and MAN-004 (Numerical Methods) for the entire semester
- Conducted regular online doubt sessions and practice exams and served students with course material

Volunteer | National Service Scheme, IIT Roorkee July 2019 - June 2020

- Worked as a Volunteer in Swachh Bharat Abhiyan Cell and organized several cleaning camps in Haridwar District
- Organised several institute central events like Blood Donation Camp and Clothes Distribution Drive

Coordinator | Thomso, IIT Roorkee October 2020

- Managed the Spell Bee event in Thomso 2019, the annual cultural fest of IIT Roorkee
- Responsible for the logistics, finance, and operations of the event

References

Nachiketa Rai

Assistant Professor

Indian Institute of Technology, Roorkee

n.raai@es.iitr.ac.in

+91 9917082787