

**EDUCATIONAL QUALIFICATIONS**

Duration	Institute	Degree	CGPA / %
2012-17	Indian Institute of Technology, Kharagpur	3 <sup>rd</sup> year, Dual degree in Computer Science	9.04/10.0
2011-12	Delhi Public School, Bokaro Steel City	CBSE(12 <sup>th</sup> Standard Board Exams)	90.2%
2009-10	Delhi Public School, Bokaro Steel City	CBSE(10 <sup>th</sup> Standard board Exams)	10.0/10.0

**ACADEMIC DISTINCTIONS**

- Secured **1<sup>st</sup> rank in state** and **International rank-11** in IMO-2012 conducted by **Science Olympiad Foundation**
- Awarded **National Talent Search Examination(NTSE)** Scholarship by **National Council Of Educational Research and Training(NCERT)** , granted to 1000 students annually
- Youngest in the state of Jharkhand (as early as class 9<sup>th</sup>) to qualify for **Regional Mathematical Olympiad ,2009** , organised by **National Board Of Higher Mathematics** securing 7<sup>th</sup> rank
- Secured an **All India Rank 86** in AIEEE-2012 among 12 lakh students with a **state rank 4**
- Secured **All India Rank 20** in **National Science Talent Search Examination(NSTSE)** in year 2012 conducted by **UNICEF**

**INTERNSHIP**

- **Summer Undergraduate Research Fellowship** Indian Statistical Institute, Kolkata  
May-July 2014  
Selected for Cryptology Summer Internship at ISI Kolkata from among about 800 applicants (only 20 selected outside Kolkata)
  - Attended special lecture series on various practical facets of Cryptology including topics like "Secret sharing using visual cryptography" ,"Key pre-distribution schemes" from renowned experts of Cryptology in India
  - Implemented RC4 stream cipher and computed an approximate probability distribution for the first few bytes of the stream; thereby proved its non-random behavior such as the biasedness of the second byte towards zero
  - Involved in a project on key pre-distribution schemes

**PROJECTS**

- **Kibitz** IIT Kharagpur  
**Yahoo Hackathon , Hacku** Jan 2013
  - Created an interactive dynamic chat application which enables one to get real time feeds of social media in response to chat content
  - Used Yahoo APIs like YQL , BOSS Search , Content Analyzer and YUI so as to extract important keywords from the chat data of a few message transactions and thus analyze to get relevant feeds

[https://hacks.developer.yahoo.com/hack/iit-kharagpur-hacku-2013-/kibitz-content-interactive-chatting/event\\_7/hack\\_463](https://hacks.developer.yahoo.com/hack/iit-kharagpur-hacku-2013-/kibitz-content-interactive-chatting/event_7/hack_463)
- **Connectivity and Resilience of Sensor Networks** Indian Statistical Institute, Kolkata  
**Summer Internship** May-June 2014
  - Implemented key pre-distribution schemes(random pre-distribution of keys and  $k$ -out graphs) for distributed sensor networks on random graphs generated using iGraph library in C++.
  - Tested schemes on large data sets and analysed various results including connectivity(simulation of number of edges versus nodes, expected number of edges ) , resilience of sensor networks under the two schemes
  - Proposed a third model  $k$ -out random graph with degree bound thereby increasing resilience
- **Image Segmentation using minimum spanning trees** IIT Kharagpur  
**Course Project** Oct 2013
  - Used minimum spanning trees to partition an image into disjoint regions
  - Prepared graph with pixels of the image as vertices with two vertices being adjacent iff they share an edge/corner and the weight being the color distance between them
  - Deployed Prim's algorithm to find maximum s costly edges in the MST and then ran multiple bfs/dfs to find the connected components in the segmentation

**SPORT PROGRAMMING**

- **Codeforces** : Maximum Rating **1726** , Handle : [utpalthecoder](#)
- **Topcoder** : Maximum Rating **1339** , Handle : [code\\_storm](#)

**MISCELLANEOUS**

- Hall Open-Soft team Coordinator and part of Hall Maths - Olympiad team
- Part of National Sports Organisation , pursuing Table Tennis from 2012-2014