

# Gaurav Sharma

B-315 LLR Hall of Residence, IIT Kharagpur – Kharagpur - 721302 – India

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## Education

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### Indian Institute of Technology Kharagpur

*B.Tech in Computer Science*

CGPA - 9.05

**Kharagpur**

2012–2016

### Chinmaya Vidyalaya

*Central Board of Secondary Education(CBSE)*

Higher Secondary School Examination, Percentage - 91.2

**Bokaro**

2010–2012

### Pentecostal Assembly School

*Central Board of Secondary Education(CBSE)*

Secondary School Examination, CGPA - 10

**Bokaro**

1997–2010

## Projects

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### Implementation of key pre-distribution scheme for sensor networks

*Supervisor : Prof Sushmita Ruj*

A key pre-distribution scheme for distributed sensor networks was implemented on random graphs generated by using igraph library in C++. The scheme was tested on large data sets and various properties of the scheme were verified.

**ISI Kolkata**

2014

### Image segmentation using minimum spanning trees

*Supervisor : Prof Abhijit Das*

An image was partitioned into pairwise disjoint regions using minimum spanning trees. A graph was constructed from the image in C++ and Prim's algorithm was used to construct the minimum spanning tree. Costly edges were deleted from the tree to generate the segments.

**IIT Kharagpur**

2013

### Chat application

*Yahoo HackU*

A chat application was created which retrieves data using keywords from the conversation to enhance chatting experience. Yahoo APIs like BOSS search and YQL were used to extract keywords from chat data to display relevant links to Yahoo news and Wikipedia pages related to those keywords

**IIT Kharagpur**

2013

## Experience

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### Indian Statistical Institute Kolkata

*Cryptology Summer Internship*

I was involved in the following activities during the internship.

- Attended a lecture series on Cryptology during the first 3 weeks.
- Completed a project on practical cryptography and security tools.
- Completed a project on pre-key distribution.

**Kolkata**

May 2014–July 2014

## Courses Undertaken

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- Compilers
- Computer Organization and Architecture
- Algorithms 2
- Machine Learning
- Software Engineering
- Formal Languages and Automata Theory
- Mathematics 1
- Switching Circuits and Logic Design
- Probability and Statistics
- Algorithms 1
- Discrete Structures
- Programming and Data Structures
- Mathematics 2

## Technical skills

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**OS:** Linux, Windows

**Languages:** C/C++, Java, Python, HTML/CSS

**Applications:** Qt, Latex, gcc/g++, Emacs, NetBeans, MySQL, Git

## Interests

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Algorithms, Cryptography, Machine Learning, Social Networks

## Sport Programming

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**Codeforces:** Rating : 1705, Handle : codehulk

**Topcoder:** Rating : 1244, Handle : Octavius

## Academic Achievements

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**2012:** Secured an All India Rank of 397 in IIT-JEE among 5 lakh students.

**2012:** Qualified Indian National Physics Olympiad being among the best 35 students in the country.

**2012:** Qualified and secured 3rd rank in Regional Mathematics Olympiad.

**2012:** Secured All India Ranks of 18 in National Science Olympiad and 49 in International Mathematics Olympiad conducted by SOF.

**2011:** Qualified in Zonal Informatics Olympiad being among the best 200 in the country.

**2011:** Secured All India Rank of 20 in NSTSE conducted by Unified Council.

## Miscellaneous

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- Won silver medal in open-IIT Hindi Elocution.
- Part of the Hall Tech-Quiz team.
- Part of National Service Scheme as a volunteer from 2012 to 2014.