

Contact Information

Third Year Undergraduate
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Education

Indian Institute of Technology Kanpur
BTech in Computer Science and Engineering (2012-present)
Cumulative Performance Index: 9.3/10.0 after 4 semesters

All India Senior School Certificate Examination, CBSE India
Scored cumulative **97.0%** marks in Senior Secondary School (2012)
School Topper

All India Secondary School Examination, CBSE India
Scored a CGPA of **10.0/10.0** in High School (2010)
Awarded **Certificate of Merit** for exceptional performance

Honours and Awards

Selected for Aditya Birla Group Scholarship (2012-2016)
(awarded to **16 students** overall from all IITs and BITS Pilani combined) by Aditya Birla Group

Award for Academic Excellence, IIT Kanpur (2012-2013)
(awarded to the **top 7%** of the batch)

Awarded Kishore Vaigyanik Protsahan Yojna fellowship, (2010)
(236 fellows were selected) by Indian Institute of Science, Bangalore

Scholastic Achievements

Secured an All India Rank of **145** in **Joint Entrance Examination**, 2012 conducted by Indian Institute of Technology

Secured an All India Rank of **39** in **AIEEE-2012**

Qualified for Onsite Regionals in **ACM ICPC** (International Collegiate Programming

Contest) **Kharagpur Regionals, 2013** (as a part of team MemoryOverflow)

Selected for Indian National Chemistry Olympiad (**InChO**) (top 300 in the country)

Qualified for the Award of **INSPIRE scholarship**

Attended the **Vijyoshi Science Camp**, Bangalore (2011)

International Olympiad of Informatics (SilverZone foundation) Gold Medal (2011)

Olympiad Rank:5

International Olympiad of Mathematics(SilverZone foundation) Gold Medal (2011)

Olympiad Rank:9

Projects

Gesture Recognition using Webcam

Summer Project under Programming Club, IIT Kanpur

Navigation and OS operations using gestures detected by a webcam (May '13 - June '13)

Used OpenCV for image processing

Gesture detection is implemented using Machine Learning

Github repo: <https://github.com/pranavmaneriker/gest-recog>

Centralised Version Control System

(Aug '12 - Nov '12)

Advanced Track Project for ESc 101: Fundamentals of Computing under Prof. Sumit Ganguly

Used a Java based front end and MySQL, ApacheDB backend to design and develop a version control system based on Git

Among the top 2 of 11 projects

Rubik's Pocket Solver

Summer Project, Rubik's Cube Hobby Group, IIT Kanpur

(June '14)

Built an $\langle R, U, F \rangle$ (3-gen) optimal solver for the Rubik's Pocket Cube (2x2x2)

Github repo: <https://github.com/pranavmaneriker/RubiksPocketSolver>

Mathematics of the Rubik's Cube

Summer Project, Rubik's Cube Hobby Group, IIT Kanpur

(June '13)

Worked on group theory applications on the Rubik's Cube.

Worked on **fewest moves** and **blindfolded solving**.

Conducted a lecture on fewest moves techniques.

12th Five Year Plan Hackathon

(April '13)

Received Certificate of Appreciation (placed 3rd in IITK) for Hackathon organised by National Innovation Council, Government of India

Scissor Lift

(Jan-Apr '14)

Semester Project, TA202

Built a scissor lift based mechanism which could lift about 35-40 kgs.

Design prototype built using **Autodesk Inventor**

Awarded Certificate of Appreciation (awarded to top 5 projects)

Internship

Aurus Network Infotech Pvt Ltd. (as Developer)

(May - July '14)

Worked with a team of 11 people on the following projects

www.superprofs.com

- Created One Time Password and order creation modules in php (Yii 2) with a backend in mysql
- Created discount coupons system for orders with a strategy pattern based rule system
- Assisted in the development of the (ember.js based) registration form for professors
- Developed an ember.js based application for discussion forums (with a backend in hapi.js/mysql)
- Page for video player and lecture list view in ember.js

www.coursehub.tv

- Developed a missed call based api (php, Yii1.1) which allowed recording start stop via missed call from registered user. Also developed the frontend for user registration for this service
- Researched the application of webRTC (mainly libcodec) for use as a server/client app for screenshare and video recording

Relevant Courses

Data Structures and Algorithms

Computer Graphics(*)

Operating Systems(*)

Theory of Computation(*)

Computer Organisation

Discrete Mathematics

Abstract Algebra

Linear Algebra and ODEs

Partial Differential Equations

Computing Laboratory

Fundamentals of Computing

Probability and Statistics

Logic in Computer Science

Complex Analysis

Analytical Calculus

Technical Skills

Languages: Java, C, C++, PHP, Javascript, Bash (shell scripting), SQL, Perl, Python, HTML/CSS, BlueSpec Verilog, Assembly (MIPS ISA)

Frameworks: PHP: Yii, Javascript: EmberJS, nodeJS

Other tools: webRTC, LaTeX, Git, OpenGL, OpenCV, vim, Beamer, GNUPlot, Octave, MATLAB, Autodesk Inventor

Extra Curricular Activities

National Record Holder

Co holder of the National Record for solving the **Rubik's Cube** in **Fewest Moves**

Ex national record holder for **one handed solving**

Also among the fastest solvers in the institute.

Programming Contests

Actively involved in contests on codeforces.com, topcoder.com (handle: **PM1729**)

Club Involvements

Rubik's Cube Hobby Group

Programming Club

Science Coffeehouse

Positions of Responsibility

Academic Mentor under Counselling Service, IIT Kanpur

(‘13-’14)

Provided academic mentoring for Introduction to Electrodynamics (Phy103)

Took classes at Hostel and Institute level

Coordinator , Rubik's Cube Hobby Group, IIT Kanpur

(’14 - present)

Organisation of club activities and workshops in the Institute

Multiple workshops organised which were attended by 100+ people.

Coordinated a team that taught the basic technique of solving.

Coordinator , Indian Open Rubik's Challenge '14, Techkriti, IIT Kanpur

Involved in the management of events in the competition

Areas of Interest

Algorithms

Image Processing

Machine Learning

Artificial Intelligence

Web Development

Abstract Algebra

Mathematical Logic

Combinatorics

System Architecture

Graph Theory

Computer Graphics

Networks