

# Soumye Singhal

SECOND YEAR UNDERGRADUATE · COMPUTER SCIENCE AND ENGINEERING, IIT KANPUR

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## Education

### IITK (Indian Institute of Technology, Kanpur)

BACHELOR OF TECHNOLOGY, COMPUTER SCIENCE AND ENGINEERING

Kanpur, India

2015 - 2019 (Expected)

- Cumulative Grade Point/ CPI : **9.8/10.0**

### BAL BHARATI PUBLIC SCHOOL, PITAMPURA

CBSE

New Delhi, India

2015, 2013

- 12th GRADE | Aggregate **95.4%**
- 10th GRADE | CGPA **10.0/10.0**

## Honors & Awards

2015 **All India Rank 579**, JEE ADVANCED

India

2015 **0.1 Percentile**, JEE MAINS

India

2014 **KVPY Fellow | All India Rank 272**, IISc Bangalore and Government of India

Bangalore, India

2012 **JSTSE Scholarship Awardee**, Government of Delhi

Delhi, India

2013 **All India Top 30**, Group Mathematics Olympiad | CBSE

Delhi, India

## Projects

### Autonomous Underwater Vehicle (AUV) [github.com/AUV-IITK](https://github.com/AUV-IITK)

IIT Kanpur

MEMBER, TEAM AUV-IITK, PROF. K.S. VENKATESH & PROF. SACHIN SHINDE

May 2016 - PRESENT

- Part of the team that built our institute's first AUV.
- Were placed 2nd at the national level competition SAVE, organized by NIOT Chennai.
- The aim of the Robot is detecting and following a line, hitting a buoy, firing torpedoes at given targets and dropping objects underwater.
- Implemented the tasks using Robot Operating System (ROS) for Controls and OpenCV for Image Processing.

### GymkhanaLive: NEWS Webapp [github.com/soumye/gykhanalive](https://github.com/soumye/gykhanalive)

IIT Kanpur

SUMMER PROJECT, PROGRAMMING CLUB

May 2016 - July 2016

- Programmed a News Web Application using Django for the use of the campus community akin to Twitter/Quora.
- The website displays the news and events of the various clubs and groups on campus.
- Implemented features like login, search, like and comment.

### System Security

IIT Kanpur

COURSE PROJECT, PROF. SANDEEP SHUKLA

Jan 2016 - Present

- Exploited and fixed various vulnerabilities like Buffer Overflow and Format string in Zoobar Server's code.
- Implemented privilege separation and sandboxing in an okws server.

### Diophantine Equations

IIT Kanpur

COURSE PROJECT, PROF. NITIN SAXENA

Oct 2016

- Studied about various methods to solve Diophantine equations and their applications.
- Gave a presentation on the same.

## Relevant Courses

### Completed

Introduction to Programming\*\*  
Introduction to Electrodynamics  
Introduction to Classical Mechanics  
Introduction to Electronics

Partial Differential Equation  
Multivariable Calculus\*  
Discrete Mathematics  
Logic in Computer Science

Linear Algebra\*\*  
Abstract Algebra  
Thermodynamics

### Ongoing

Data Structures and Algorithms  
Computer System Security

Probability and Statistics  
Computer Laboratory

Computer Organization  
Introduction to Economics

\* : A\* Grade for exceptional performance

\*\* : Batch Highest among 450 students

## Skills

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**Programming** C/C++, Python, X86 Assembly, ROS, Octave , MIPS, Verilog, R  
**Web** Django, JavaScript, HTML, CSS, SQL  
**Utilities** Linux shell utilities, Git, GDB,  $\text{\LaTeX}$ , Sublime, Vim, ,OpenCV  
**Platforms** Windows, Linux(Ubuntu), Arduino, Android, FPGA

## Positions of Responsibility

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### Programming Club (IITK)

SECRETARY

*Jul. 2016 - Present*

- Helped organize Linux Installation Drive, Fresher's Programming Contest and other activities.
- Helped in the functioning of the club by organizing contests and lectures on various topics.

### ACA IITK

PROJECT MENTOR

*Jan 2016 - Present*

- Mentoring 6 students on a project on System and Cyber Security.

## Miscellaneous

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2016 **Google Devfest**, Weather and Sports App

*IITK*

2015 **Electromania**, Made an Egg-Basket game using Digital IC's and logic gates.

*IITK*