# Abhimanyu

Third Year Undergraduate
Computer Science And Engineering
Indian Institute of Technology, Kanpur

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## EDUCATION

| April 2019 | B.Tech (Computer Science and Engineering) | IIT KANPUR | 8.2/10.0 |
|---|---|---|---|
| April 2015 | Class XII(Central Board For Senior Education) | DPS Hisar | 96.20% |
| April 2013 | Class X(Central Board For Senior Education) | NIS,Hisar | 10.0/10.0 |

## ACADEMIC ACHIEVEMENTS

- Secured AIR-**189** in **JEE(Advanced)2015** among **1.5 lakh** students.
- Secured AIR-**245** in **JEE(Mains)2015** among **13 lakh** students.
- Selected for the prestigious **KVPY** scholarchip, in stream SX.
- Certificate of merit for being among **top 0.1%** in the country in XII mathematics by CBSE.

## OTHER ACHIEVEMENT

- Secured **Third position** in **5th Inter IIT Tech Meet** in **Indoor Localisation** among **10** competing **IITs**.

## PROJECT

- **C# Compiler**(**Compilers Course Project**)                                    *Jan'18-Present*
  (Mentor: Professor Shubhajit Roy)

  – Implementing a **C#** to **MIPS** compilers in **C**.
  – Supports higher level constructs like **structs,arrays** and **switch**.

- **NachOS Extension**(**OS Project**)                                           *July'17-Nov'17*
  (Mentor: Professor Mainak Chaudhary)

  – Extended basic **NachOS** to a fully grown operating system.
  – Implemented **fork, join, sleep, exit** and other **system calls**.
  – Tested **First come First serve(FCFS), Shortest Remaining Job First (SRJS)** and **Round Robin(RR)** scheduling algorithms.

- **Securing Zoobar Server**(**Security Course Project**)                          *Jan'18-Present*
  (Mentor: Professor Sandeep Shukla)

  – Found various security vulnerabilities in the server code.
  – Exploited vulnerabilities using control hijacking techniques like **buffer overflow**,**format string attacks** and **ROP**.
  – Performed various browser-based attacks like **SQL injection, XSS, CSRF** on Zoobar web application.
  – Fixed security bugs in web server, implemented **privilege separation** and **server-side sand-boxing** of executable profiles in the okws server.

## OTHER PROJECTS

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|---|---|
| SLAM (Simultaneous Localization and Mapping): | Experimented with localization algorithms. |
| WASP (WiFi And Simulated Positioning): | Developed autonomous robot to reach target using WiFi singals. |
| Sentiment Analysis of Movie Reviews: | Implemented various ML algorithms for sentiment analysis. |

## TECHNICAL SKILLS

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|---|---|
| Programming Languages (PROFICIENT): | C, C++, Python |
| Programming Languages (FAMILIAR): | PHP, Javascript, Java, x86 |

## INTERESTS

| **Computer Architecture** | **Operating Systems** | **Computer Security** |
|---|---|---|

## RELEVANT COURSES

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|---|---|---|
| **CS422:** Computer Architecture* | **CS220:** Computer Organisation | **CS330:** Operating Systems |
| **ESO207:** Data Structures and Algorithms | **CS340:** Theory of Computation | **CS345:** Algorithms II |
| **CS628:** Computer Systems Security* | **CS315:** Principles of Database Systems* | **CS335:** Compilers Design* |
| **CS771:** Introduction to Machine Learning | | |

[1] *-Ongoing Courses

## EXTRACURRICULAR ACTIVITIES AND EVENTS

- Developed a server based android app to store medical history of the user in Google Devfest-2016 organized by E-cell

- Participated in Robotricks in the inter-hall event Takneek-2015.

- Pursued skating as my CPA(Compulsory Physical Activity) in my 1st year being the Captain.