# SUDHANSHU BANSAL

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## EDUCATION

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|---|---|
| **Indian Institute of Technology Kanpur** | *July 2017 - Present* |
| Btech Undergraduate | Overall GPA: 8.0/10 |
| Department of Computer Science Engineering | |
| **Netaji Model School** | *2017* |
| 12th CBSE | Percentage: 91% |
| **Holy Family Convent School** | *2015* |
| 10th ICSE | Percentage: 94.6% |

## ACADEMIC ACHIEVEMENTS

**All India Rank 155** JEE ADVANCED, 160,000 candidates

**All India Rank 604** JEE MAINS 1.12 million candidates

**KVPY scholar**

## WORK EXPERIENCE

**Sprinklr, Gurugram**                                      May 2020 - June 2020
*Team:Research Role:Backend*

· Patched official lucene queryparser for validating results without sending to elasticsearch
· Developed a java based MockJsonServer(returns a dummy json response) for a quick frontend-backend development configured with slackbot
· Created a multithreaded data collection java application with persistence and caching in kafka and hosting it with elasticsearch

**Addverb Technologies,Noida**                                      December 2018
*Speech to text*

· Using keras created neural nets trained to pick specific speech words from continuous speech mode.
· Researched on the performance of neural nets like CNN, LSTM-RNN and siamese-NN.

**Summer of Code, IIT Kanpur**                                      May 2018 - July 2018
*Full stack Developer*

· Created a web based platform for mentors and students to communicate based on an individuals interest.
· Created chat app using socket programming, database management using mongodb, created a dynamic website using angular

## HACKATHONS

**InterIIT TechMeet**                                      December 2019
· Placed 6th amongst all IITs in the 24hr long "Capture the Flag" event

**Okta Hackathon**                                      March 2019
· Worked with okta api and created the front end for web in React

**Codechef Hackathon in collaboration with Alibaba Cloud**                                      September 2018
· Worked with Codechef API and created a problem suggestor web app for new programmers. Placed in top 10

## PROJECTS

**Reputation Networks**                                    January 2020 - May 2020
*Undergraduate Project under Swaprava Nath*

· Designing a social network for clustering people based on non-quantitative features
· Designing a jugdement system that would determine the various aspects of any non-quantitative art form

**Internet of Things, Alexa Skill**                        May 2018 - July 2018
*Programming Club IIT Kanpur*

· Worked with various amazon services like Lambda,Alexa skill kit, Rekognition,SNS, S3 bucket, Dynamodb
· Created an app which reports the replaced objects in a video

**Cyber Security**                                          January 2018 - April 2018
*Association of Computing Activites*                        *IIT Kanpur*

· Performed various Capture the flag based on BufferOverflow, Heap Overflow, Shell code injection, sql injection

## COURSE PROJECTS

**Reading Comprehension of Abstract Meaning**              September 2020 - Present
*CS779: Statistical NLP*

· Assigning abstract words which are highly imperceptible or nonspecific within a given comprehension
· Evaluating the model that is trained on one definition, on another definition.

**Designing Java Compiler**                                January 2020 - March 2020
*CS335: Compiler Design*

· Create a Lexer and Parser(LLstar) for Java8
· Created AST using antlar

**Working with gemOS**                                     August 2019 - November 2019
*CS330: Operating Systems*

· Implemented system calls like fork, mmap for mapping virtual memory to physical memory.
· Implementing read-write locks on shared memory for parallel hashing

**Interpreter for OZ**                                     August 2019 - November 2019
*CS350A: Principles of Programming Languages*

· Performed various Capture the flag based on BufferOverflow, Heap Overflow, Shell code injection, sql injection

## RELEVANT COURSES

**Programming** : Data Structure and Algorithm, Algorithms2, Principles of Programming Languages
**Systems** : Operating Systems, Compiler Design, Designing Verifiable Secure Systems, Database Systems, Programming for Performance, Computer Organisation
**Machine Learning** : Intro to ML, Statistical NLP, Linear Algebra and Differential Equations
**Computation**: Discrete Mathematics, Probability in CS, Logic, Numerical Methods, Theory of Computation, Cryptography, Game Theory

## TECHNICAL STRENGTHS

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|---|---|
| **Computer Languages** | C/C++(Proficient) , Java, Python, Javascript, Haskell |
| **Web** | MEAN, mysql, socket.io |
| **Tools** | ElasticSearch, Lucene, Kafka, Kubernetes, Gradle, Keras |
| **Software** | Intellij, LaTeX, Git, Docker, Unity, Matlab, Jupyter Notebook |

## POSITION OF RESPONSIBILITY

**Programming Club**     May 2019 - July 2019
*Deep Dive Into CP19 Mentor*     *IIT Kanpur*

· Mentored a group of 15 students teaching them algorithms that are used in competitive programming

**Programming Club**     April 2018 - March 2019
*Secretary*     *IIT Kanpur*

· Managing various Programming club events and workshops throughout the year

**Academic Mentor**     April 2018 - March 2019
*Intro to Programming*     *IIT Kanpur*

· Guided freshers who face difficulty in Programming by hosting Lectures and Doubt-Clearing Sessions.

## INTERESTS

**Competitive Programming**

· Rated **candidate master** on codeforces and highest rating of **5 star** on codechef