

BHAGWAT GARG

Third Year Undergraduate
Department of Computer Science and Engineering
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EDUCATIONAL QUALIFICATIONS

Year	Degree	Institution	CGPA/%
2019 - Present	B.Tech, CSE	Indian Institute of Technology Kanpur	9.6 /10.0
2019	CBSE – XII	Lions Public School, Gurgaon	95.2%
2017	CBSE – X	Lions Public School, Gurgaon	10.0/10.0

SCHOLASTIC ACHIEVEMENTS

- **Academic Excellence Award** 2019
Amongst top 10% students of the batch
- **All India Rank 197** 2019
JEE Advanced (amongst 160,000 candidates)
- **All India Rank 154** 2019
JEE Main (amongst 1.1 million candidates)
- **All India Rank 108** 2018
Kishore Vaigyanik Protsahan Yojana (KVPY) Scholar
- **National Rank in top 1%** 2018-19
National Standard Examination in Physics (NSEP)
- **State Rank 144** 2016-17
Scholarship under 'Haryana Science Talent Search Scheme'

WORK EXPERIENCE

Intern at National Blockchain Project, IIT Kanpur

Mentor : Prof. Sandeep K. Shukla May'21 - Present

- Worked on a project which focused on **interoperation of permissioned blockchain networks**
- Analyzed various research papers and learnt how different blockchain networks can interoperate
- Built two independently working fabric networks and developed their business contracts
- Designed a **relay service** which forwards requests from one network to the other and fetches the response back
- Developed **smart contracts** to authenticate incoming requests and validate response data from other networks

GRM Project Mentee at IBM

Mentor : Lekha Panikulangara Jan'21 - May'21

- Worked on a team project which involved studying **data-immutability, confidentiality** of Hyperledger Fabric in land and property registrations
- Devised a mechanism to facilitate the transfer of land ownership from one party to the other
- Designed the **smart contracts** for the transactions using Hyperledger Fabric's JavaScript SDK
- Developed a **CLI application** to provide a simple way of interaction with the blockchain network

TECHNICAL SKILLS

Languages : Python, C/C++, JavaScript
Machine Learning : Tensorflow, OpenCV
Blockchain : Hyperledger Fabric, Hyperledger Indy
Web : ReactJs, NodeJs, MySQL, MongoDB, HTML/CSS
Other Tools : Git, \LaTeX , Bash, Markdown

MISCELLANEOUS

- Secured **627th** rank in Google Kickstart 2021 - Round D
- Max Rating of **1797** on Codeforces (handle: bhagwatgarg)

RELEVANT COURSES

Data Structures and Algorithms Fundamentals of Computing (A*)	Discrete Mathematics Computer Organisation	Probability in Computer Science Software Development and Operations
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A*: Grade for outstanding performance

PROJECTS

Sudoku Solver

Self Project Nov'20 - Dec'20

- Developed a tool that solves sudokus by extracting sudoku puzzles from user-provided images
- Preprocessed the raw input images using OpenCV library and then extracted the sudoku matrix's corners
- Trained a **Convolutional Neural Network** model using Tensorflow to extract the numbers from the matrix
- Designed a **backtracking algorithm** to solve the puzzle

Scheduler Web-App

AT Project, ESC101 | Instructor : Prof. Piyush Rai Aug'19 - Nov'19

- Created a web-app for the campus community which allows the users to manage all the calendars in one place
- Integrated **authorization & authentication**, allowing users to create/update/delete events in their calendars
- Implemented a feature allowing users to follow channels and view the latest events of these channels on their dashboard
- Designed frontend using ReactJs and backend using NodeJs

Steganography Tool

Self Project Sept'20 - Oct'20

- Designed and developed a tool which can be used to **'hide' text** in a user-provided image without creating any visible differences in the image provided
- Encrypted the data with state of the art algorithms like **PBKDF2, AES-256, SHA256** using pycrypto library
- Provided a simple UI to the tool for an enhanced user experience using PyQt5 library

Advanced Competitive Programming

Programming Club, IIT Kanpur May'20 - July'20

- Learnt about different programming techniques and implemented various data structures and algorithms
- Participated in weekly contests organized on Codeforces

POSITIONS OF RESPONSIBILITY

Secretary

Programming Club, IIT Kanpur Apr'20 - Mar'21

- Work involved organizing contests and conducting workshops for the campus community
- In addition to this, contributed to two major projects:
 - **Life@IITK** : Designed the frontend for user registration and verification workflow using ReactJs
 - **Student Search** : Added basic improvements to the UI

Student Guide

Counselling Service, IIT Kanpur Oct'20 - Present

- Managed responsibility of 5 freshmen by ensuring their mental and academic well being
- Coordinated with the Counselling Service and helped in the organization of Orientation for over 1000 freshmen