ABHIJAY MITRA | 18IE10001

INSTRUMENTATION ENGG. (B.Tech 4Y)
MINOR in COMPUTER SCIENCE & ENGG. (B.Tech 4Y)

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2022	B.TECH	IIT Kharagpur	9.12 / 10
2018	All India Senior School Certificate Exam	DPS Ruby Park, Kolkata CBSE	84.4%
2016	Secondary School Exam	South Point High School, Kolkata CBSE	10 / 10

INTERNSHIPS

Software Engineering Intern at Proficient Vision Solutions Pvt Ltd (Computer Vision Lab E&ECE Dept.)   Nov 2019-Dec 2019

Guide: Prof. Sudipta Mukhopadhyay
• Aimed to remove rain and fog from HD video streams in real time.
• **Developed license for product** (which encrypted machine details like MAC Id, hard disk id, date of installation) along with user provided details such as id, password, number of concurrent users, and unique details cameras to be granted access.
• Implemented **RSA algorithm** from scratch for licensing the software.
• Built the pre-processing steps of the fog removal code, incorporating **histogram equalisation** and stretching, in CUDA to enhance speed of computation multiple folds.
• Demonstrated the product at **WBP Telecom Office** under foggy conditions generated by smoke from fire.

AWARDS AND ACHIEVEMENTS

• Codechef (handle-> abhj) Peak Rating **1942 (4-Star Coder)** , Codeforces (handle-> abhj) Peak Rating **1821 (Expert).**

• Secured All India Rank **2157** among 0.231 million candidates in JEE Advanced 2018.

• Secured All India Rank **5444** (99.55 percentile) among 1.2 million candidates in JEE Main 2018.

• Secured Rank **92** (99.91 percentile) among 0.1 million candidates in WBJEE 2018.

COMPETITION/CONFERENCE

Google Kickstart 2020
• Globally Ranked **443** among 8000 participants in Round D and **731** among 10000 participants in Round C.

HackerEarth Coding Contests
• Ranked **5** in June 2020 Data Structure and Algorithms Contest and **10** in August Easy 2020 among 2000 participants.

Overnite Kshitij 2020 IIT Kharagpur
• Qualified for Finals of Overnite, a night long ACM certified team competitive programming contest.

COURSEWORK INFORMATION

• **Computer Science** : Algorithms I*, Programming and Data Structures*, Algorithmic Game Theory (Ongoing).
• **Mathematics** : Probability and Stochastic Processes, Transform Calculus, Mathematics I, Mathematics II.
• **Electrical and Electronics** :Introduction to Electronics*, Signals and Networks*, Analog Electronics*, Measurements and Electronic Instruments*, Digital Electronics* (Ongoing) , Control Systems and Engineering* (Ongoing), Instrumentation Devices* (Ongoing).   * Includes Laboratory along with Theory
• **MOOC :** Number Theory and Cryptography | UC San Diego, Divide and Conquer Sorting and Searching and Randomized Algorithms | Stanford, Graph Search Shortest Paths and Data Structures | Stanford, Machine Learning | Stanford

SKILLS AND EXPERTISE

• Competitive Programming, Parallel Computing (CUDA), Web-Development(Front-End), Machine Learning.
• **Programming Languages** - **proficient** - >C++, C **familiar** -> HTML, CSS, Javascript, Octave **Software** - TINA TI, Solidworks.

POSITIONS OF RESPONSIBILITY

Core Team Member | Technology Transfer Group IIT Kharagpur   Apr 2019 - Jan 2020
• Worked alongside a team of 18 members directly under the Dean of Sponsored Research and Industrial Consultancy.
• Conducted several **IPR** (Intellectual Property Rights) Workshops and contacted many companies for sponsorship.
• Engaged progressively towards achieving initiatives like **IndAc** that aims at commercialising the patents of the institute.

Volunteer | Kshitij IIT Kharagpur   Jan 2019
• Conducted, invigilated and evaluated several olympiads and had a hands-on experience on Fest management.

EXTRA CURRICULAR ACTIVITIES

• **Member | LBS Hall Chess Team | 2018-19** - Represented LBS Hall in inter-hall general championship.
• **Member | LBS Hall Math Olympiad Team | 2018-19** - Participated in olympiads conducted by the Hall.
• **Tutor | Student Welfare Group | 2019** - Programming and Data Structures teaching and doubt clearing sessions.
• **Author at Quora** - Have written advisory answers related to JEE (over 0.7 million content views).
• **Cadet | 3 Bengal Tech Air Squadron NCC | 2018-20** - Actively participated in weekly parades and blood donation camps. Also camped in Combined Annual Training Camp 2018.

!self declaration by the student