

VARUN GUPTA

Electrical Engineer, IIT Delhi

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EDUCATION

Minor Degree Computer Science

Indian Institute of Technology, Delhi

2018 - Ongoing

GPA

9 / 10

B. Tech. Electrical Engineering
(Power and Automation)

Indian Institute of Technology, Delhi

2017 - Ongoing

GPA

8.79 / 10

Class XII

Apeejay School, Noida

2017

94.2 / 100

TECHNICAL SKILLS

C++

Java

Python

MATLAB

JavaScript

Wireshark

MySQL

TensorFlow

Linux

Arduino

PROJECTS

End to End Encrypted Chat Application

07/2019 - 08/2019

- Developed a CLI based chat application using Socket Library and used RSA for encryption of messages
- Implemented server to run in 3 modes Non-Encrypted, Encrypted and Encrypted using signature

Shell Based Operating System

02/2020 - 04/2020

- Developed UI for a shell based OS capable of taking input from I/O devices and performing basic math
- Implemented Fibres, Non-Preemptive and Preemptive Scheduling using stacks to improve performance

EXPERIENCE

Data Analyst

Innominds Pvt. Ltd.

05/2020 - 07/2020 Hyderabad

Company Description

- Analysed research papers and developed a library in python that performs differentially private learning
- Devised an algorithm to improve privacy of data sets by using statistical tests like Anova, P-value analysis
- Compared accuracies and privacy factors of all the methods on data sets containing private information

POSITION OF RESPONSIBILITY

Secretary

Electrical Engineering Society, IITD

06/2019 - 06/2020

Spearheaded flagship events & workshop
Redesigned the official website leading a team of 4 executives

Technical Editor

Board for Student Publication, IITD

05/2018 - 05/2019

Compiled, edited and designed the annual magazine of club, maintained club's website
Administered the publicity by designing posters for the activities and events hosted by the club

Developer

DevClub, IITD

05/2018 - 05/2019

Improved peer-to-peer connection of webRTC based data sharing software Sendata using Socket Library

PROJECTS

Bus deboard assistance for Visually Impaired

📅 01/2019 - 04/2019

Course Project Embedded Systems

- Integrated GPS with Raspberry Pi to compute upcoming stops, operated it as a BLE device to advertise data
- Developed an Android App that interprets advertised data and speak out upcoming bus stops using Google TTS
- Devised a socket communication system to assign bus routes and view the live location of buses on a website

Improving speeds in Li-Fi networks

📅 06/2019 - 02/2020

Summer Undergraduate Research Project

- Developed a LiFi model using spacial multiplexing to achieve higher data rates than single Transmitter-Receiver model
- Simulated a 4X4 model of VLC network on MATLAB to analyse the variation of SNIR vs dimension of panel
- Fabricated a hardware model to observe SNIR values using eye diagram and verified the results

Security in Robot Operating System (ROS)

📅 01/2020 - 06/2020

Course Project

- Analysed various research papers to identify attack vectors in ROS (Robot Operating System) protocol
- Devised a novel secure DuoMeter communication and logging mechanism to mitigate these attack vectors
- Implemented the protocol on distributed autonomous projects and simulated it to ensure scalability

Accidental Palm Rejection in Touchscreen Device | Samsung R&D

📅 12/2018 - 05/2019

Industrial Project

- Worked with Samsung on building a classier to reject unintended touches on their touchscreen device
- Achieved low latency (<1ms) and high accuracy (90%) on Kivy simulator, work sent for advance testing

Game-based Training in Cyber Security

📅 07/2018 - 12/2018

Project with DRDO

- Designed and implemented a Game-based simulator to facilitate training in security using an interactive approach
- Put high emphasis on game design to make it serve dual purpose of learning through assignment and entertainment
- Fabricated levels that could illustrate various types of security threats like Phishing and Distributed DOS

POSITION OF RESPONSIBILITY

Mentor

Board for Student Welfare, IITD

📅 05/2019 - Ongoing

Guided 6 first year students to ensure smooth transition into IITD

Event Head

Literati, IITD

📅 02/2019

Actively helped in organising various Keynote sessions, Panel discussions and Performing art events

Vice Captain

Table Tennis Team

📅 05/2018 - 05/2019

Represented Udaigiri House among 13 hostels in the inter hostel Competition

ACHIEVEMENT



SURA (Summer Undergraduate Research Award)

Awarded SURA by IITD for laudable results in LiFi research



IITD Semester Merit Award

Awarded scholarship for being in top 7% performers among undergraduates



Hackathon

First position in the Hackathon held by Devclub; Integrated Messenger App on terminal using GraphAPI



JEE Main

Secured All India Rank 454 in General category in JEE Main, 2017



KVPY

Secured Rank 235 and awarded Fellowship through a two-tier process conducted by Government of India



Olympiads

Qualified for National Chemistry (State Top 1%), National Physics Olympiad (National Top 1%)