# Simarpreet Singh

📍 New Delhi, India 🐹 simarpreetsingh.019@gmail.com 📞 09315261718 🛗 19/12/2000 📮 Indian

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🗓 simarpreet019 🥆 simarpreetsingh-019.github.io 🕒 Other profile links

### **ABOUT ME**

I am passionate about technology. I am an active member of many tech communities in Delhi, I have learned about different technologies and joined many hackathons. I have a good knowledge of data structures and algorithms, Image processing and am familiar with the most popular languages like Python, C++, C, and Java.

Currently working in the research field of Reversible Data Hiding using PVO, Cryptography in images and multimedia files, and Blockchain.

I have a good interest in web development.

I also learned about OpenCV, Selenium, Scrapy etc.

## **EDUCATION**

### **Bachelors of Technology, CSE**

Guru Tegh Bahadur Institute of Technology 08/2018 – 07/2022 | New Delhi, India Persuing Btech in CSE from GGSIPU. CGPA: 8.06

### Class 12th

Guru Harkrishan Public School, Shahdara 2017 – 2018 | New Delhi, India Completed my class 12th in Science-Non Medical. CBSE Board: CGPA: 8.3

#### Class 10th

Guru Harkrishan Public School, Shahdara 2015 – 2016 | New Delhi, India CBSE Board: CGPA: 8.6

# INTERNSHIPS AND OPEN SOURCE CONTRIBUTION DRIVE

### **Research Trainee Intern**

Defense Research and Development Organisation, (DRDO, MoD)

02/2022 - present | New Delhi, India

Research Trainee Intern at Scientific analysis Group, DRDO.Researching and working on Reversible Data Hiding in images and multimedia files using steganography and cryptography.

Working on Survey papers for Blockchain

### **Technical Content Writer**

The Sidepath

04/2021 – 06/2021 | New Delhi, India My role was to write, review and deliver content for technical articles to be published on website or newsletter.

### **Open Source Contributor**

Student Code-In &

06/2020 - 08/2020 | New Delhi, India

In Top 25 contributor of Student Code-In's 3 month contribution drive, where I contributed by creating tutorial notebook  $\mathscr D$  for German to English translator using seq2Seq and Attention model

# **CERTIFICATIONS**

- ullet Responsive Web Design, freeCodeCamp.org  ${\mathscr O}$
- Placement Preparation Program, Pepcoding
- Python For Vision and Detection : OpenCv Python ℰ
- ullet Data Analysis with Python, Jovian.ml  $\hat{\mathscr{D}}$

### **PROJECTS**

# Canny Edge Detection, Sketchy Image Generator, Detecting geometrical shapes in an image using OpenCV ${\mathscr D}$

- Implemented Canny Edge Detection to make sketchy image generator with contours, gaussian blur thereby generating a shape detector in an image.
- Added features like time, date, text-in live video, pedestrian detection from video, face and eye detection on live camera

### Camera Web App ∂

- Created a camera and a gallery application that demonstrates the functionalities of a camera in context of a progressive Web App.
- Used Media Query to capture video stream from a webcam, Canvas to capture a frame and put it into an image,
- Used canvas to add image filters and implement functionalities like zoom in and zoom out

### OpenBoard Clone ∂

- Developed a customized OpenBoard clone by implementing Canvas API and Browser Module
- Structured the UI using HTML, CSS and for real-time drawing on board used Socket.io
- Utilized Express.js server

### Amazon price tracker and notifier $\mathscr D$

This project will send you notification on email whenever your chosen item's price go less than the given price.

- Used Puppeteer to automate and scraping data, script will be running after every 30 mins to recheck. time can be customised accordingly.
- Used nodemailer for sending mail to notify the user.

### Indoor Navigation AR ∂

the objective is to make indoor navigation easier via augmented reality and more effective marketing by attracting youth to the new technology

### **SKILLS**

### Java, CPP,

**Python** (Image Processing OpenCV Numpy Pandas Scrapy Selenium),

## Blockchain,

**Web Devlopment** (HTML CSS JS React.js Express.js Node.js Selenium Socket.io WebRTC),

DBMS (MYSQL MongoDB), CLI/Tools (Git Github)

### COMMUNITY

# CPPINDIA 🔗

Moderator-Core Team

2020 - present | New Delhi, India

- Interacted & invited new speakers for weekly sessions
- Catered to attendees' queries during the session on CPP

### GDSC GTBIT $\,\mathscr{D}\,$

Head of Outreach and Logistic Dept.

2019 – present | New Delhi, India

- Managed and ensured smooth execution of events
- Headed the promotional activities, interacted with like-minded communities