Sarthak Rout

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Second Year Undergraduate
Department of CSE, IITK

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Educational Background

Year	Degree/Exam	Institute	CPI/%
2019 - Present	B.Tech (Computer Science and Engineering)	Indian Institute of Technology, Kanpur	9.5/10
2019	CBSE(Class XII)	Sir Padampat Singhania Public School, Kota	95.2/100
2017	CBSE(Class X)	DAV Public School, Chandrasekharpur, BBSR	10/10

Scholastic Achievements

- Recipient of **Academic Excellence Award** from IIT Kanpur. *2019*
- Secured All India Rank **202** in JEE (Advanced) among over 0.2 million students. *2019*
- Secured All India Rank **207** in JEE (Main) among over 1.3 million students. *2019*
- Qualified for **OCSC of IJSO and IAO 2016, IOAA 2017, IOAA 2018, IChO and IOAA 2019** organised by HBCSE.
- Selected for **Kishore Vaigyanik Prostahan Yojana (SA)** fellowship with AIR **42**, IISc Bengaluru *2018*
- Recipient of **National Talent Search** Scholarship, NCERT from MHRD, Gov. of India. *2017*

Hackathon

- **HCL HackIITK Hackathon** Aug '20
  - Developed a **malware detection tool** to classify malware by analysing data in **PE format** and **API trace reports**.
  - Trained another model to detect **botnets** by **network traffic analysis** of packets using **Python** libraries.
  - Secured 16th position of merit out of more than 3000 teams.

Projects

- **TestApp - Live** (May '20 - Jul '20)
  Self Project
  - Developed an assessment application using **Angular** integrated with **Firebase**.
  - Implemented concepts of **routing**, **services**, **observables** and **modularity** and used **RxJs** library.
  - Used it to conduct online MCQ examination for about 20 students.

- **InfoSec IITK** (Feb '20 - Apr '20)
  By ACA | Mentors: Priydarshi Singh, Varun Goyal
  - Learnt about **SQL, XXS and XXE injection** along with how to prevent them.
  - Learnt about **privilege escalation** using **Burp Suite, Metasploit, Nmap** etc .
  - Reported **critical** vulnerability in OARS, IITK which exposes databases storing grades of 6K+ students.

- **gradeLess - Course Project ESC101** (Aug '19 - Nov '19)
  Under Dr. Piyush Rai, CSE
  - Developed a **webapp** using **Angular** to check True/False and MCQ questions of **printed** answer sheets.
  - Integrated it with backend written in **Express** and used **Python** as scripting language for image processing.

Technical Skills

- **Programming Languages:** C, C++, Python, Type-Script, Octave/Matlab
- **Frameworks:** Angular, Express
- **Libraries :** Pandas, SciKit-Learn, OpenCV, Selenium
- **Tools :** Git, LaTeX, Metasploit

Relevant Courses

Fundamentals of Computing*	Real Analysis and Calculus*	Linear Algebra and ODE
Data Structures and Algorithms	Numerical Analysis*	Number Theory
Introduction to Electronics	Computer Organisation(o)	Software Development(o)
Modern Cryptology(o)	Quantum Computing(o)	**Neural Networks and Deep Learning(C)**

(* ≡ A* grade, o ≡ Ongoing, C ≡ Coursera)

Positions Of Responsibility and Extracurriculars

- Secretary, Programming Club
- Bagged 2nd position out of 250+ teams in Mathemania-2020, a competition based on math puzzles - **Results**.
- Secretary, Entrepreneurship Cell (Startup Internship Program)
- Competitive Programming: **Codechef**

Hyperlinks are present at appropriate places in bold. *Last Updated: February 18, 2021*