

VIPUL UJAWANE

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📅 9th October 1997

ACADEMIC DETAILS

Education	Institute / Board	Year	CGPA / %
B. Tech and M. Tech (Dual Degree): Quality Engineering Design (Industrial Electronics)	IIT Kharagpur	2016 - 2021 (Expected)	8.48 / 10
Class - XII	RBSE	2015	79 %
Class - X	ICSE	2013	87 %

Internships

General Electric (GE Digital)

Digital Technology Intern

May'19-July'19

- Summer Intern at John F Welch Technology Centre for GE Power.

PROJECTS

Gru

IDOR, Ajax, CSRF, Captcha, Web Security

June'18

- Developed a Series of Proof of Concept Exploits to access data from ERP, IIT Kharagpur
- Reported IDOR, Cross Site Request Forgery, and Improper AJAX Vulnerabilities with possible Mitigation Techniques
- All Vulnerabilities responsibly disclosed to ERP Section, IIT Kharagpur

Network Sniffer

Embedded Systems, Computer Networks, Python, C++, Arduino, ESP8266

Jan'19-Present

- Capstone Project for Embedded Systems Lab, under Prof. Alok Kanti Deb and Prof. Debdoot Sheet, IIT Kharagpur
- A Layer 2 (Data Link Layer) Packet Capturing Device, which Sniffs packet from Wifi Routers.
- Captured Packets are Stored in a SD Card and Also Available via Serial Communication through Wireshark

Campus Security System

Software Engineering, UML, JAVA, SQL

Jan'18-April'18

- Term Project for Software Engineering under Prof. Sudip Misra, IIT Kharagpur
- Followed the Waterfall Life-cycle Model for the development of the project.
- Created a Specifications Requirement Sheet, Data Flow Diagram and UML Diagram for the Project.
- Back-end Developed in JAVA and MySQL for Database. Used the JUnit framework for Unit Testing the project.

Astrea

Elasticsearch, Flask, Information Retrieval

March'18

- A Natural Language Based Search Engine for finding records of Indian Law (Supreme and High Court) Cases)
- Created a search API using Flask with Searching mechanism developed on Elasticsearch
- Uses Unsupervised clustering to for synonym generation and Query Expansion
- Uses LexRank Algorithm for Case Summary Generation
- Awarded a Silver Prize for the project in Technology General Championship, IIT Kharagpur

PING : Professor Information Gatherer

Web scraping, information retrieval, python, requests, beautifulsoup

Jan'19-Feb'19

- A Information Retrieval System designed to gather Professor's data working in the area of Interest
- Presents a Ranked List based on Jaccard similarity to input queries with results saved in a xls format.

Acad-Search

Python, Django, HTML, CSS, Javascript, JQuery

May'17-June'17

- A Central Repository build for the students of IIT Kharagpur to hold Notes, Question Papers, Slides, etc.
- Back-end Developed in Django (Python), while Front End Developed using HTML, CSS, JavaScript and JQuery

- Mentored students on the Project during Kharagpur Winter of Code (KWOC)
- Developed a web Crawler to search for past year papers from the IIT Kharagpur Library website

Servers

Socket Programming, Python, C, Network Application

May'17-June'17

- Created a Client and a server for a game. Message transfer done using UDP via sockets for Python.
- Developed a FTP Server and a Client using TCP on C for POSIX Operating Systems

All Source Codes Available on github.

TECHNICAL SKILLS

- **Areas :** Software Engineering, Web Development, Software and Systems Security, Information Retrieval
- **Languages :** Python, C, C++, Java, Javascript, MySQL, L^AT_EX, x86 Assembly, AVR Assembly, MATLAB, Shell Script
- **Tools :** GDB, Metasploit, Wireshark, Nmap, Burp Suite, SQLMap, Ghidra, Arduino

ACHIEVEMENTS

- **Team x0rc3r3rs : Capture The Flag Team :** Best Global Rank 718 ,Country Rank 34 on CTFTIME.
- **BSides San Francisco CTF 2019 :** Ranked 90/1138
- **INSHack CTF 2019 :** Ranked 99/1058
- **Securinets CTF 2019 :** Ranked 107/436
- **Facebook/Google BountyCon CTF 2019 :** Ranked 138/404
- **ENCRYPT CTF 2019 :** Ranked 175/681
- **MITRE STEM CTF : Cyber Challenge 2019 :** Ranked 205/587
- **Pragyan CTF 2019 :** Ranked 239/449

*CTF Writeups posted on <https://itsvipul.com/writeups>

RELEVANT COURSES

Programming & Datastructures*	Software Engineering*	Computer Organization and Architecture
Information Retrieval	Computer Networks*	Computational Intelligence in CyberSecurity
Embedded Systems*	Digital Electronics*	Controls System Engineering*

* marked courses have a laboratory component.

CERTIFICATIONS

- **Software Security :** Coursera
- **Web App Penetration Testing :** Cybrary
- **Metasploit :** Cybrary

POSITIONS OF RESPONSIBILITY

- **Student Mentor** July'18-Present
Mentored 1st-year students under the Student Mentor Programme conducted by Student Welfare Group.
- **Electronics Head : TeamKART** October'16-Present
 - TeamKART is the Official FSAE Team of IIT Kharagpur
 - Led a Group of 5 Members and was responsible for all decisions related to Electronics
 - Built a Wiring Harness, a Driver Dashboard Display and A Electronic Gear Shifting System for the latest car K4

EXTRA CURRICULAR ACTIVITY

- Created the first VFX Movie of IIT Kharagpur as a part of Technology Film and Photography Society, IIT Kharagpur
- Part of the Silver Winning Ad-Design Team of General Championship, IIT Kharagpur