SUVANSH ARORA

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OBJECTIVE

To develop advanced programming skills to solve real life problems.

EDUCATION

- **IIIT Jabalpur**   Jabalpur ,MP India
  Master of Technology - Computer Science and Engineering; CGPA: 8.3   *Sept 2020 - July 2022*
  Courses: *Network Security and Cryptography, Digital Watermarking, Clustering Algorithms*

- **Chandigarh University**   Mohali,Punjab India
  Bachelor of Engineering - Computer Science; CGPA: 8.4   *July 2016 - June 2020*
  Courses: *Operating Systems, Data Structures, Analysis Of Algorithms, Networking, Databases*

EXPERIENCE

- **DELL EMC(Graduate Intern(SDE))**   Onboard
  Pune, Maharashtra   *July 2021 - July 2022*
  - **Testing Framework for SDK(Mock Server implementation)**: Introduced a new testing framework for powerscale SDK, which automates testing process for each component. This helped us release SDK within two weeks.(previously more than 2 months).
  - **CLI Implementation**: Designed command line interface, introducing multiple commands to access isilon cluster.
  - **Crawler.**: Automated process to traverse each node/cluster and fetch out required information and store in CSV format.
  - **Security Parser**: Developed a diff tool for powerscale clusters using advance data structure Trie, that reports anomalies over the cluster.

- **AMC Pvt. Hospital(Intern(SDE))**   Onboard
  Uttarakhand   *Jan 2020 – Apr 2020*
  - **Database Management**:
    Stores and manages patient data and hospital information on MySQL database.
    Designed a software with an interactive user interface using Java(awt, applet, swing).
    Digitised the billing process and other hospital operations.
    This project helps in saving a lot of time in data entry of new patients and maintains the integrity of the data.
    [Github: Hospital.]

PROJECTS

- **Secure Client-Server Model**:
  Implemented a Client server communication that is secured using S-AES algorithm and digitally signed before transmitting.
  Action Item includes creating hashing algorithm for RSA, encrypted message creation using AES, and TCP-IP communication.
  [Github: Client-Server comm. model.]
  [AES, RSA, Digital Signature, Socket, C language]   (Apr 2021)

- **Detect Image Alteration** :
  Designed a safe mechanism to transmit image using digital watermarking, encryption and image filtering over a network.
  Action Item includes Matrix transformation, image compression and conversion to different forms using DCT DWT, and divide and conquer approach to solve this problem.
  We were able to achieve good recovery of original image once altered as compared to other classical approaches, which is helpful in copyright verification.
  [Github: Image watermarking.]
  [Digital Water Marking , Dct, Dwt, Python , CV]   (Jan 2021)
- **Image clustering and rotation search**:
  Developed an algorithm to cluster similar images, search disoriented images and match them with the original images.
  Action item includes modifying the agglomerative nesting algorithm, for engineering drawing dataset. Using this algorithm we were able to modify the distance matrix in such a way that it catches the the properties of engg drawings.
  Model was trained in such a way, that it could also classify the images that are not in their correct orientation.
  [Github: Clustering-Rotation search.]
  [CNN , Clustering [Agglomerative], Python]   (Aug 2020)

ACHIEVEMENTS

- **Aspiring Minds** - Quantitative Aptitude Certified(900/900).
- **GATE qualified 95%** in 2020
- Long Challenge (Feb-2022) Codechef : **171/16755**
- Hackerrank - Problem Solving(Intermediate)
- **Hackerrank** - 5 star rated coder

LEADERSHIP EXPERIENCE

Teaching Assistant for students of I year and II year with respect to Introduction to programming using C and Python, for two semesters in IIITDMJ.

Organised contests like bug finding competition for college students.

COURSES

- **Coursera**: Machine Learning By Stanford University
- **Cetpa-Infotech**:
  Machine Learning and Applications
  Ethical Hacking
- **Nptel Certified**:
  Introduction to Automata and languages
  Data Structures and Algorithms using Python
  Problem Solving through C
  Design and Analysis of Algorithms using C

SKILLS SUMMARY

- **Languages**:   C++/C, Python, Java, SQL
- **Utility**:   Linux, Windows
- **Tech Stack**:   Git, Rest API, Jenkins, Venv, Socket, Swagger-codegen, SDK, Mock-Server

INTERESTS

Sports and Fitness
Exploring new technologies