

# SUVANSH ARORA

Software Engineer

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## EDUCATION

### Indian Institute of Information Technology

Master of Technology - Computer Science and Engineering : CGPA: 8.6

MP, India

September 2020 - July 2022


### Chandigarh University

Bachelor of Engineering - Computer Science : CGPA: 8.4

Punjab, India

July 2016 - June 2020




## EXPERIENCE

- MathWorks** Bengaluru, India  
Oct 2022 - Present
  - Software Engineer - 2 : Simulink Data Workflows**
    - Simulink Data Management** | C++, MATLAB, AWS, Excel, Json, INCAsv  
Designed infrastructure and interface to expand Simulink's data source compatibility, facilitating seamless integration with diverse sources, including AWS, Excel, and custom data source specific to organisations.
    - Data Consistency Check for Simulink** | C++, MATLAB, Simulink  
Achieved a 50% improvement in Simulink's simulation performance, directly benefiting strategic customers.
    - Logger for Performance Monitoring** | C++ Microservices, Python, logger |   
Engineered a C++ logger for multi-component codebases, enabling real-time performance tracking of microservices, and triggering alerts for backend performance exceeding 10% to ensure proactive optimization.
    - Data driven Decisions** | C++, MATLAB, Git, AWS Athena  
Developed Data Analysis tool for Engineering Managers to help analyse the customer's product usage trend.
- Dell EMC** Pune, India  
July 2021 - Oct 2022
  - Software Engineer : Unstructured Data Storage Division**
    - Datamover** | C++ Microservices, Python, REST API, Replication, High Availability  
Engineered a robust solution, optimizing dataset transfers across distributed clusters and enhance fault tolerance.
    - PowerScale SDK Test Automation** | Python, Mock-Server, Swagger, SDK  
Introduced testing framework for Powerscale SDK, leading to a 90-95% reduction in resource usage for the team.
    - PowerScale InsightIQ** | Python, Postgresql, Pylons, WSGI, Rest API, Cluster Health Monitoring  
Resolved multiple Security Vulnerabilities in Framework & Architecture for NAS Cluster Monitoring tool.
    - PowerScale Binary Watchdog** | Python, Tries, Hashing, Intrusion Detection  
Fabricated a data comparison tool (Diff tool) for Powerscale to Report Anomalies on a Cluster.
- Indian Institute of Information Technology**  
Teaching Assistant : Python, Data Structures in C September 2020 - July 2021

## SKILLS SUMMARY

- Languages:** C++, Java, Python, MATLAB, SQL, Javascript, Shell Scripting.
- Utility:** Linux, Git, Jenkins, Docker, Swagger, Simulink, Jira, Postman, Perforce.
- Tech Stack:** FastAPI, UWsgi, RabbitMQ, MySQL, Socket, Swagger-Codegen, AWS, Postgres, QT, REST.

## PROJECTS

- Secure Client-Server Model:** | AES, RSA, Digital Signature, Socket, C |   
Implemented a secure client-server communication using S-AES algorithm and digital signatures. Ensured near 100% security by employing hashing algorithms such as RSA and AES for message integrity in TCP/IP communication.
- Detect Image Alteration:** | Digital Water-Marking, Dct, Dwt, Python, CV |   
Engineered a secure image transmission mechanism incorporating digital watermarking, encryption, and filtering over a network, achieving high PSNR restoration rates of 67.2% for each non-overlapping image block.
- Hospital Data Digitization:** | Java, MySQL, AWT, Applet |   
Established management of patient data and hospital information on a MySQL database. Crafted software featuring an interactive user interface using Java, thereby digitizing the billing process and other hospital operations.

## ACHIEVEMENTS

- Aspiring Minds - Quantitative Aptitude Certified**(900/900)
- GATE qualified** in 2020
- Long Challenge (Feb-2022) **Codechef : 171/16755**