SUVANSH ARORA

Software Engineer

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EDUCATION

Indian Institute of Information Technology   MP, India
Master of Technology - Computer Science and Engineering : CGPA: 8.6   *September 2020 - July 2022*

Chandigarh University   Punjab, India
Bachelor of Engineering - Computer Science : CGPA: 8.4   *July 2016 - June 2020*

EXPERIENCE

- **MathWorks**   Bengaluru, India
  Software Engineer - 2 : Simulink Data Workflows   *Oct 2022 - Present*
  - **Simulink Data Management** | *C++, MATLAB, AWS, Excel, Json, INCAcsv*
  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
  Software Engineer : Unstructured Data Storage Division   *July 2021 - Oct 2022*
  - **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**