# Aarti Sharma

🌐 [Website](#) 📱 +91-863-028-5875 ✉ [sharmaaarti50528@gmail.com](mailto:sharmaaarti50528@gmail.com) in [LinkedIn](#) ⌂ [GitHub](#)

## Experience

### Defence Research and Development Organisation                     July '24 – Ongoing
***Junior Research Fellow*** | *Deep Learning, Python*                                *Hybrid*
- Working on *Infrared Small Multiple-Target Detection*, in rapidly changing environment *(Images & Videos)*.

### Indian Institute of Technology, Roorkee                          Feb '24 – Ongoing
***Machine Learning Researcher*** - *AMSC* | *Deep Learning, Python*                       *Hybrid*
- Working on *Machine learning in Computer vision & Image processing*, Large Langauge Model and explainability of black box models using *Explainable AI (XAI)* methods in collaboration with Dr. Millie Pant (HoD-*AMSC*).

### Gaia Smart Cities                                            June 2023 – April 2024
*Senior Software Engineer (Backend)*| *Java*                                           *Remote*
- Initiated and leading the development of flagship product Sensez9 a cutting-edge scheduler designed for commerce industry to help automate the tax filing. My role involves defining project goals, architecture, technology stack, and development processes
- Responsible for defining the system architecture of Sensez9, making critical decisions related to database design, system architecture, and API integrations

### MarketPlug                                                  July 2022 – May 2023
*Software Engineer (Backend)* | *Java, Springboot*                                       *Remote*
- Implemented microservices architecture on Springboot framework, leading to significant reduction in code complexity and improved software scalability
- Developed robust authentication and authorization protocols using OAuth2, enhancing security measures by implementing two-factor authentication for high-risk areas of application.
- Streamlined the deployment processthrough Docker and CI/CD, reducing deployment time and increasing overall efficiency of development operations.
- Developed comprehensive test suites using JUnit and Mockito to achieve 95% code coverage.
- Followed Agile methodologies for development and worked collaboratively with cross-functional teams.

### Decipher Zone                                               Jan 2022 – June 2022
*Software Engineering* | *Java*                                                     *Gurugram*
- Developed and maintained enterprise-level applications using Java 8/11, Spring Boot, REST, JDBC, Microservices, JSON/XML and implemented RESTful web services using Postman for testing.
- Collaborated with clients for requirements gathering, implementation, and delivery.
- Worked collaboratively with cross-functional teams using Agile methodologies and JIRA for project management

## Education

### Indian Institute of Technology - Roorkee                             2017 - 2019
*Master of Science* **(Mathematics)** *CGPA 7.9/10*                                      *Roorkee*

### University of Delhi                                              2013 - 2016
*Bachelor of Science* **(Mathematics)**                                              *New Delhi*

## Publication

**Financial Context-Aware Multiagent-Based RL Approach for Portfolio Optimization [Preprint]** 📄

**Deep Learning Architectures for Image Captioning: A Comprehensive Review [Preprint]** 📄

## Projects                                                                    ⌂

**Drought Prediction using Satellite Images** ⌂ | *GIS, Python, Tensorflow*
- Implemented two deep learning model architectures i.e. *U-Net(original)* & *U-Net with ResNet50 Encoder Backbone* with transfer learning for accurate prediction of drought area & segmentation of affected land to provide insight for premptive measures.

## Technical Skills

**Languages**: Java, Python, SQL
**Frameworks & Technologies**: Spring Boot, Jenkins, Docker, AWS, JUnit, Linux,
**Machine Learning**: Computer Vision, NLP, Feature Engineering, TensorFlow, Keras, Pandas, NumPy, OpenCV.
**Developer Tools & Interests**: Git, Atlassian (Bitbucket, Jira), IntelliJ, Distributed Systems, Algorithms, Data Strcutures

## Achievement

- Secured Rank 190 and 535 among more than 3 lakh candidates in IIT JAM in year 2017 and 2016 respectively.
- Secured Rank 899 among more than 5.8 lakh candidates in GATE 2019