

OM KHARE

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Education

Georgia Institute Of Technology, Atlanta, GA

Aug, 2024 – May, 2026

MS in Computer Science, Specialization: Computing Systems

College Of Engineering Pune Technological University, India

Aug, 2020 – May, 2024

B.Tech in Computer Engineering, Honors in Data Science and Machine Learning

CGPA - 9.20/10 | Rank - 7/182

Skills

Frameworks/ Databases	React, Node, Docker, Kubernetes, Express, Django, Android, MongoDB, MySQL
Programming Languages	C, C++, Python, Java, PHP, JavaScript, Swift, HTML, CSS
Other technologies	Git, Github/ Gitlab, AWS, Hadoop, Tensorflow, Pytorch, NLP, OpenCV, YOLO
Relevant Coursework	Operating Systems, Databases, Computer Networks, Data Science, Natural Language Processing Artificial Intelligence, Data Structures & Algorithms, GPU, Web Systems, Software Engineering

Experience

Graduate Teaching Assistant — Georgia Institute of Technology, Atlanta, GA

Aug, 2024 – Present

- Responsible for creating and grading assignments, mentoring student course projects, and engaging hands-on programming sessions for CS 7650: Natural Language Processing

Software Engineering Intern — Deutsche Bank, India

May, 2023 – July, 2023

- Designed and implemented the LSA clustering algorithm to categorize session requests, identifying 8 clusters with similar characteristics, which when automated, saved 100 man-hours per month for the organization.
- Performed sentiment analysis on employee comments on knowledge articles to determine content effectiveness. An increase of 15% in positive feedback was observed, and the results were presented in the form of an analytical dashboard.

Research Intern (Prism) — Samsung Research (R&D Bangalore), Remote

April, 2023 – August, 2023

- Developed an On-Device Graph Database from scratch by implementing a SPARQL parser to handle complex READ, INSERT, DELETE, and FILTER queries on RDF data, reducing query processing time by 60%
- Outperformed expected performance metrics of 1 ms query plan execution and 20k minimum operations per second. Implemented reader-writer locks and multi-threading to ensure database integrity and to avoid data conflicts

Project Manager — Software Development Society, India

Aug, 2021 - May, 2024

- Responsible for overseeing client interactions and coordinating project timelines and deliverables, ensuring successful execution.
- Projects done: College Election Portal, College PhD admission Portal, Social Security Scheme website for IMA, Pune

Projects

Laboratory Inventory Management System (LIMS) | [Project Details, Certificate](#)

- Designed, developed, and deployed a full-stack application to help chemists keep track of tests to be performed on raw materials.
- It included features like digital signature, role-based logins, calculating test results, and making dynamic reports for 150+ tests with time-to-time database backups.
- Position: Project Lead | Techstack: *React, Node.js, SQL, AWS*

LeafNST (Image Data Augmentation for Plant Leaf Disease Dataset) | [Github link](#)

- Improved an existing image data augmentation technique by creating a single deep neural network and using SOTA frameworks.
- Performed a comparative analysis with traditional and GAN-based approaches and proved our method to be efficient in terms of time, accuracy and computing power.

CoVigilance (Crowd management system) | [Github link and demo](#)

- Collaborated to build a real-time, contact-less crowd management system by leveraging machine learning
- Created a web portal that provides real-time analysis for the authorities and a mobile application for the public to see the real-time statistics with push notifications to alert about crowd density
- Techstack: *React, Node.js, Firebase, React Native, Python, TensorFlow, Docker*

Demand Paging in xv6 | [Github link](#)

- Implemented Demand Paging, a crucial memory management technique that allows for efficient memory usage by loading pages into memory only when they are needed, reducing the overall memory footprint in xv6 operating system using C.

Publications

"LeafNST: An Improved Data Augmentation Method for Classification of Plant Disease using Object-Based Neural Style Transfer", **Om Khare**, Sunil Mane et. al. — Discover Artificial Intelligence Journal by Springer — [Paper link](#)

"Improved Object-Based Style Transfer with Single Deep Network ", Harshmohan Kulkarni, **Om Khare** et. al. — Springer's ICICV 2024 Conference (Best Paper Award)