

# Siddhartha Ajay Jejurkar

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## EDUCATION

### Rochester Institute of Technology

GPA: 4.0/4.0

*Master of Science in Computer Science*

*Aug. 2023 – Dec 2025*

- **Coursework:** Machine Learning, ML Systems architecture, Secure Programming in Rust, Cloud Computing, Computer Vision, Computer Graphics, Big Data

### Birla Institute of Technology and Science, Pilani

GPA: 3.48/4.0

*Bachelor in Electronics and Electrical Engineering*

*Aug. 2018 – Aug. 2022*

## TECHNICAL SKILLS

**Languages :** C++, Java, Rust, Python, C, JavaScript, SQL, HTML/CSS, GLSL

**Frameworks & Libraries :** PyTorch, Numpy, OpenCV, CUDA, OpenMP, ReactJS, Spring-boot, REST API, OpenGL

**Database :** PostgreSQL, Oracle, MySQL, MongoDB (NoSQL)

**Tools :** AWS, Jenkins, Docker, Kubernetes, Linux, Git, Bash/Shell, Selenium, CMake, Blender, Unity

## RELEVANT EXPERIENCE

### Graduate Teaching Assistant

Aug. 2024 – Present

*Rochester Institute of Technology*

*Rochester, NY*

- Distinguished as **1 of 6 TAs** out of the entire Graduate CS Student body, responsible for instructional support across three foundational courses (CS1, CS2, and CSAP) for approximately **100 undergraduate students**.
- Delivered weekly recitation sessions, graded assignments and tutored students on Java and Python.

### Software Consultant

Sep. 2022 – Aug. 2023

*Genpact India Pvt Ltd*

*Bangalore, India*

- Engineered a comprehensive CI/CD infrastructure utilizing Jenkins, Ansible, Docker, and AWS EC2, optimizing workflows to achieve a 15% reduction in deployment times and effectively double the monthly release cadence.
- Contributed to the development of a full-stack web application using React, MySQL, and Java Spring Boot framework, developing multiple **RESTful APIs**, resulting in **25%** reduction in critical query response times.
- Optimized an extensive Automation Testing Suite with **Selenium** WebDriver for frontend validation of a central database repository elevating test coverage to **97%**, improving software reliability and development efficiency.

### Software Engineer Intern

July 2021 – Dec. 2021

*Nucleus Software Exports Ltd*

*Noida, India*

- Engineered a robust database migration utility using python scripts to automate master migrations and improve schema portability between UAT and Production environments, leading to a **40%** reduction in migration timelines
- Integrated a custom testing framework in a product's SDLC cycle, to verify the referential integrity of databases in different environments, enabling early capture of incompatibilities and **32%** reduction in data corruption scenarios

## PROJECTS

### Pytorch inspired Deep Learning Framework

[Project Link](#)

- Architected a **cross platform deep learning framework** for building fully connected and convolutional neural networks achieving **97.14%** validation accuracy on MNIST and **78.39%** accuracy on CIFAR-10 datasets.
- Implemented a high performance Tensor library in C++ with a robust autograd system for generating computational graphs and gradient calculations. Accelerated performance using OpenMP and CUDA for CPU and GPU parallelization reducing training time for MNIST to **57 seconds for 10 epochs**.

### GPU accelerated real-time Ray Tracer

[GitHub Link](#)

- Engineered an efficient 3D ray tracing graphics pipeline integrating CUDA for GPU acceleration and OpenGL for real time rendering, achieving a remarkable **800x** improvement over naive CPU implementation using C++.

### Google Summer of Code (GSoC) at Blender

[Project Link](#)

- As an open source contributor, enhanced Blender (3D OSS) across four major release cycles (versions 3.0 to 3.3) by delivering critical features and resolving high-impact bugs, directly improving functionality and user experience.
- Boosted performance by optimizing GLSL shaders and integrating custom overlay rendering, resulting in a significant **20%** improvement in UI responsiveness for the 2D workspace and accelerating texture mapping tools.
- Resolved a decade-old design flaw in the BMesh API by rewriting the low-level selection logic in C, adding edge selection support in the UV editor, and effectively addressing a backlog of critical user issues.