

AMAN AGARWAL

Providence, RI | +91 7628968473 | aman_agarwal1@brown.edu | LinkedIn: aman190202 | Github : aman190202

EDUCATION

BROWN UNIVERSITY

Master of Science
Major in Computer Science; AI/ML Pathway

Providence, RI
Expected May 2026

SRM INSTITUTE OF SCIENCE & TECHNOLOGY

Bachelor of Technology
Major in Computer Science; Minor in Software Engineering

Tamil Nadu, India
August 2020 – May 2024

Cumulative GPA: 9.31/10.0 ; Scholarship for Academic Excellence 2020-21

Relevant Coursework: Probability & Statistics, Linear Algebra ; Advanced Calculus; Machine Learning & Applications; Artificial Intelligence

EXPERIENCE

INDIAN INSTITUTE OF SCIENCE

Research Intern

Bangalore, India
Jan 2024 – June 2024

- Collaborated with PhD researchers in analyzing inverse rendering methodologies by conducting ablation studies to evaluate each method's impact
- Investigated Gaussian Splatting techniques, employing parallel neural networks for inferring sparse images without prior depth

STANFORD VISION LAB

Research Intern

Stanford, CA
Oct 2023 – Jan 2024

- Integrated NeRF-Capture, an application that estimates poses using Apple's AR-Kit API while capturing photos, with Zip-NeRF, cutting COLMAP processing time by over 50% and speeding up the overall pipeline
- Researched Zip-NeRF on dense-sampled iPhone datasets to understand the appearance of floating clouds in low precision camera-based NeRFs and evaluate the need for Camera Preconditioning methods

PROJECTS

RAY TRACER ON APPLE SILICON

August 2024

- Developed a Ray Tracer from scratch built entirely on Apple Silicon's MLX Library for GPU processing
- Implemented various Computer vision and graphics refining techniques from scratch.

LOVING VINCENT

March 2022

- Developed a Neural Style Transfer model to efficiently apply feature transformations on video frames, providing a method for creating visually appealing videos with artistic styles and smooth frame-rates for better visualization
- Produced an automated system to perform custom feature transfers, resulting in an impression of moving paintings

RESCUE-SHARK

March 2022

- A web-application based SOS community for truck drivers made out of WhatsApp API, dissipating emergency requests
- Winner of SharkHacks3 Hackathon for "Most Creative Use of Twilio"

ACTIVITIES

NEXT TECH LAB

Head of AI/ML Research Division

Tamil Nadu, India
Sep 2020 – May 2024

- Interviewed and managed a team of 30+ sophomore researchers, overseeing their projects and ensuring their success
- Oversaw the lab's research projects, which included over 25 machine learning projects and 15 other research projects, and executed over 20+ events and workshops, ranging from sessions to hackathons

ADDITIONAL

Interests : Data Science, Inverse Rendering, Computer Vision, Computer Graphics, Statistical Learning, Cinema

Languages : Python3, C/C++, Bash, CMake, JavaScript

Libraries & Frameworks: JAX, MLX, TensorFlow Keras, PyTorch, PyTorch 3D, NumPy