AMAN AGARWAL

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EDUCATION

BROWN UNIVERSITY — Providence, RI
Masters of Science in Computer Science — Expected May 2026
GPA: 4.0/4.0; Relevant Coursework: 3D Computer Vision & Deep Learning, Computer Graphics

SRM UNIVERSITY — Chennai, India
Bachelor of Technology in Computer Science & Engineering — Sep 2020 – May 2024
GPA: 3.98/4.0 ; Scholarship for Academic Excellence - Top 1% of Cohort

EXPERIENCE

INDIAN INSTITUTE OF SCIENCE — Bangalore, India
Deep Learning Intern — Jan 2024 – May 2024

- Optimized novel view synthesis frameworks to achieve a **15% performance improvement** using sparse images
- Conducted **3+ ablation studies**, streamlining research workflow & reducing paper publication timeline by **3 weeks**
- Reproduced and delivered benchmark analysis of over 5 different papers, highlighting core sections to be focus on

STANFORD UNIVERSITY — Stanford, CA
Deep Learning Intern — Oct 2023 – Jan 2024

- Integrated Apple's ARKit with 3D reconstruction pipelines, replacing old methods, **reducing processing time by 50%**
- Enhanced Neural Radiance Fields methods by introducing **dense-sampling techniques**, effectively eliminating floater artifacts and achieving a **100% reduction in error rate**

UNIVERSITY PROJECTS

RENDERING CLOUDS AND TERRAIN - *Computer Graphics @ Brown* — Dec 2024

- Designed and implemented a **ray-marcher** to produce realistic cloud renderings from scratch
- Built a **ray-tracer** to generate procedural terrains using fractal noise techniques
- Optimized rendering performance by integrating **OpenMP**, reducing computation time from **hours to seconds**

NEURAL RADIANCE FIELDS - *Computer Vision @ Brown* — Dec 2024

- Developed a **machine learning pipeline** to predict the color and density of points in 3D space, enabling **novel view generation** from multiple scene inputs.

ACTIVITIES

NEXT TECH LAB — Chennai, India
Head of AI Operations and Research — Apr 2022 – May 2024

- Recruited a team of over 50+ undergrad researchers in a span of over 2 years, guiding them to conduct novel research
- Hosted over 20+ talks, 5 hackathons and 3 research seminars, contributing significantly to the research culture
- Aided over 10+ students in securing research and industry internships, providing guidance throughout recruitment process

ADDITIONAL

Research: Computer Vision, Machine Learning, Neural Radiance Fields, Gaussian Splatting, Inverse Rendering
Technical : Python3, C++, Bash, JavaScript
Libraries & Frameworks: PyTorch, TensorFlow, JAX, MLX, PyTorch3D, OpenGL, WebGL
Achievements : Selected as one of the top undergraduate ML researchers in India to attend Amazon ML Summer School (2022), Won MLH's SharkHacks3 for creating an application that created a network of drivers to facilitate Emergency response (2021)