AMAN AGARWAL

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EDUCATION

Brown University — Providence, RI
Master of Science in Computer Science ; GPA: 4.0/4.0 — *Expected May 2026*

SRM University — Chennai, India
Bachelor of Technology in Computer Science & Engineering ; GPA: 3.98/4.0 — *Sep 2020 – May 2024*

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 focus on

Stanford University — Stanford, CA
Deep Learning Intern — *Oct 2023 – Jan 2024*

- Integrated Apple's ARKit with 3D reconstruction pipelines, replacing old methods and 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

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 and led a team of over 50+ undergraduate researchers over 2 years, guiding them to conduct novel research.
- Organized over 20+ talks, 5 hackathons, and 3 research seminars, fostering a vibrant research culture.
- Mentored 10+ students, assisting them in securing research and industry internships by providing recruitment guidance.

ACHIEVEMENTS

- **Selected as one of the top undergraduate ML researchers in India** to attend the **prestigious Amazon ML Summer School (2022)**, gaining advanced insights into state-of-the-art machine learning frameworks and techniques.
- **Secured 1st place at MLH's SharkHacks3 (2021)**, leading the development of an **innovative emergency response driver network**, revolutionizing disaster response systems.
- **Awarded the Scholarship for Academic Excellence**, ranking in the **top 1% of the cohort at SRM University**, recognizing outstanding academic performance and research contributions.

TECHNICAL SKILLS

Programming Languages
Python3, C++, Bash, JavaScript

Libraries & Frameworks
PyTorch, TensorFlow, JAX, MLX, PyTorch3D, OpenGL, WebGL