

ANAV CHAUDHARY

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EDUCATION

PURDUE UNIVERSITY

Master of Science in Computer Graphics Technology

West Lafayette, IN

2023-Present

NETAJI SUBHAS UNIVERSITY OF TECHNOLOGY

Bachelor of Technology, Major in Computer Engineering

New Delhi, India

2019-2023

PROFESSIONAL EXPERIENCE

GRAPHICS RESEARCH GROUP, IIIT

Research Intern

New Delhi, India

Feb 2022 – Jun 2023

- Worked on creating a rendering pipeline for photorealistic medical volume visualization using a CUDA-based Monte Carlo ray tracer.
- Developed a user friendly functionality for rendering photorealistic 3D color images of the human body with real-time interactive transparency.
- Created a tool to generate surface meshes of Organ Structures from a 3D Segmentation volume.
- Utilizing industry-leading frameworks such as VTK and ITK, created a novel dataset of Photorealistic images for use in further research goals.

LETS UNBOUND

Coding Mentor & Curriculum Designer

Mumbai, India

Aug 2020 – Sept 2021

- Designed the course curricula for Game development and App Development using Python from scratch, which served as one of the primary offerings of Lets Unbound, working in direct collaboration with the Founders.
- Guided and oversaw the revamp of the Python curriculum and oversee the expansion of the advanced python curriculum into diverse streams such as App Development, Game Development, and Data Science.

SATHWIK SOFTWARE SOLUTIONS

Intern (Programming & Quest Design)

Mar 2020 – May 2020

- Worked as a developer on the game, 'Citizen of Rome – Dynasty Ascendant', a highly rated family/Dynasty life sim set in the Roman Republic, currently available on both PC and Mobile devices.
- Created the much-awaited 'Warfare' set of questlines centering on the military aspect of the Roman Republic from scratch.

SKILLS AND ABILITIES

- Programming Languages, Frameworks, and APIs- C, C++, C#, Python, OpenGL, CUDA, GLSL, Qt5, Javascript, Lua, MYSQL, Flutter, Arduino
- Engines and Software - Unity, Unreal Engine 5, Blender, Adobe Photoshop, Android Studio
- Soft Skills – Public Speaking and Communication, Multitasking, Ability to work independently, Flexibility

RESEARCH, PROJECTS AND PUBLICATIONS

- Research on Medical Imaging and Photorealistic Visualization of 3D Volumes **(02/2022-Present)**
- Thesis on differentiating between natural and ai-generated images using neural networks **(2023)**
- Monte Carlo Ray Tracing Using CUDA (05/2023-06/2023); A CUDA based GPU implementation of a naïve Monte Carlo Raytracer. (<https://github.com/Anav-117/MonteCarloRayTracer>)
- OpenGL PBR Pipeline (06/2021 - 07/2021); Implementation of the Physically Based Render (PBR) Pipeline with Image Based Lighting (IBL) in OpenGL (<https://github.com/Anav-117/OpenGL-PBR>)
- HEROES: An Unreal Engine-based Human and Emergency Robot Operation Education System, <https://doi.org/10.48550/arXiv.2309.14508>
- Anav Chaudhary, Maanas Talwar, Avil Goel, Gaurav Singal, and Riti Kushwaha. 2022. De-Fence: LoRa based Hop-to-Hop Communication. In 2022 Fourteenth International Conference on Contemporary Computing (IC3) (IC3- 2022), <https://doi.org/10.1145/3549206.3549312>
- Sponza Model Render (05/2021 - 06/2021) Real-Time render of Crytek's Sponza Model using OpenGL (<https://github.com/Anav-117/OpenGL-Lighting-Test>)
- Boids Simulation (09/2021 - 10/2021) A 2D simulation of the swarming and flocking behavior exhibited by various animals (most notably birds and fish). (<https://github.com/Anav-117/BoidSimulation>)