# ANAV CHAUDHARY

anav262001@gmail.com • 765 543-3085 • LinkedIn • GitHub • Portfolio

## EDUCATION

**PURDUE UNIVERSITY**
***Master of Science in Computer Graphics Technology*** **2023-PRESENT**
**4.0 GPA**;

**NETAJI SUBHAS UNIVERSITY OF TECHNOLOGY** **2019-2023**
***Bachelor of Technology, Major in Computer Engineering***

## PROFESSIONAL EXPERIENCE

**PURDUE UNIVERSITY**
**Graduate Teaching Assistant** **Jan 2024 – May 2024**

- Led weekly lab sessions for **120+ students**, resulting in a marked improvement in student performance.
- Assisted in improving student performance by implementing interactive learning activities, resulting in a 20% increase in average quiz scores compared to the previous semester.

**GRAPHICS RESEARCH GROUP, IIIT**
**Research Assistant** **Feb 2022 – Jun 2023**

- **Orchestrated a 25% acceleration in rendering times** in a CUDA-based Monte Carlo ray-tracer for photorealistic medical volume visualization to create a novel dataset of **100,000+ photorealistic images**.
- Developed an innovative tool using VTK, **reducing processing time by 40%** for generating surface meshes of Organ Structures from 3D Segmentation volume.

**LET'S UNBOUND**
**Coding Mentor & Curriculum Designer** **Aug 2020 – Sept 2021**

- Pioneered the creation of comprehensive Game Development and App Development curricula in Python, integral to Lets Unbound's offerings, driving a **20% increase** in student enrollment.
- Spearheaded the redesign of the Python curriculum, expanding it into App Development, Game Development, and Data Science streams, resulting in a **15% surge in program diversity and student engagement**.

**CITIZEN OF ROME – DYNASTY ASCENDANT**
**Programmer & Quest Designer** **Mar 2020 – May 2020**

- Contributed as a developer to **'Citizen of Rome – Dynasty Ascendant,'** a top-rated family/Dynasty life simulation game available on PC and Mobile, driving a **25% increase** in the number of players.
- Originated and implemented the highly anticipated 'Warfare' questlines, enhancing the military narrative of the Roman Republic within the game, resulting in a **30% surge in user satisfaction and prolonged gameplay**.

## SKILLS AND ABILITIES

- Programming Languages, Frameworks, and APIs- C, C++, C#, Python, OpenGL, CUDA, Vulkan, 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

- Vulkan Renderer (09/2023-12/2023); A versatile renderer written in Vulkan to display meshes in multiple distinct styles. (https://github.com/Anav-117/VulkanRenderer)
- 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)