



» Education

Jaypee Institute of Information Technology, Sector-62
Bachelor of Technology - C.S.E

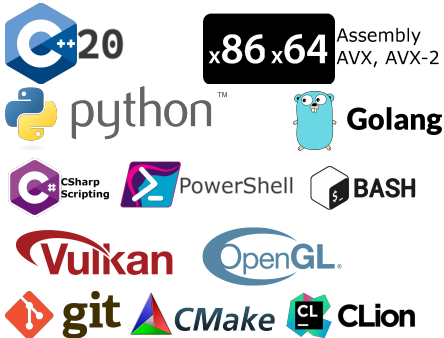
NOIDA, India
July 2019 - present

Courses: Operating System, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Networking, Databases

» About Me

As a passionate and dedicated **C++ Graphics Programmer**, I excel in delivering high-quality, outcome-oriented solutions by focusing on the process and maintaining a positive attitude. My strong problem-solving and superb debugging skills, coupled with patience and adaptability, enable me to tackle complex challenges. Committed to writing clean and maintainable code, I take responsibility for my work and continuously strive for self-improvement.

» Tools And Tech.



» Other Tools

Visual Studio, Re-Sharper, Visual-Assist, Blender, Unity, Unreal-Engine

» Soft Technical Skills

- Rendering/Graphics Pipeline
- CPU, GPU Architecture
- Engine Architecture
- Acceleration Data Structures
- 3D & Vector Mathematics
- GPGPU Programming
- Procedural Generation
- Ray-Tracing Concepts
- Image processing
- Network Programming
- Android C++ Native
- Prompt Engineerin

» Volenteering

NSS volunteer - Oct 2019-20
JIIT NOIDA, India

Helped out at NGOs, campaigns in interest of environment, blood donation, food distribution etc.

» Experience

1. Viga Entertainment Studios

- Graphics Engineer (Remote)** (Feb 2023 - May 2023, 4 mos)
Conversion of video with depth data to 3D mesh / point-cloud for "volumetric streaming" between individuals using ZED cameras.
- Graphics Engineer (Remote)** (June 2022 - Aug 2022, 2+ mos)
As part of the Core Team,
 - Creating Documentation for products
 - Speeding up Face Capture for Real-time Applications.
 - Code maintainence.
- Graphics Engineer Intern** (Oct 2021 - Apr 2022, 7 mos)
Learned a lot as an Intern.
 - Mesh refinement** Optimizing No. of vertices in captured mesh then adding lost details using mean curvature. *Multi-threading, real-time editable and disk caching.*
 - Camera calibration** Intrinsic-Extrinsic parameter estimation of cameras for face reconstruction with AprilTags. (*Python*)
 - Deploying scalable build systems** CI/CD Ready, single step, cross platform build process with CMake, VcPkg, QT-5,6 support including a custom file-patcher for libraries and automatic dependencies resolution from servers.
 - Project architecting** Planned architecture for "Scan Stage" and was praised for the same
 - Wand calibration for Motion capturing** on synthetic dataset.

» Projects

- SETU Game-Engine (major)** (July-Nov '22)
Cross-platform(Windows, Linux, Android) Modular engine in OpenGL & C++
- OpenGL-TestSite** (May-Oct '21)
(see also: NutCracker) Framework for rapid prototyping of OpenGL in C++
- NutCracker (WIP)** (May-Till '22)
Multiplatform Framework for Vulkan, OpenGL, DirectX using C++Modules
- Particle Swarm Optimization algorithm Visualization** (May '22)
with interactive GUI rendering from scratch in Vulkan
- RayTracing-Tests (GPGPU-Accelerated)** (Jun-Aug '21)
Based on Peter Sherley's "Ray-tracing in one weekend" Series.
- Scene perception for visually impaired (minor)** (Apr '22)
Python based with object recognition, depth estimation and text-to-speech
- Live depression detection on Tweets (minor)** (Nov '21)
Python based with sentimental analysis, twitter APIv2, tkinter, torch
- Bank Management System** (May '21)
A BMS with interactive UI rendering from scratch.
- NotPing-OnlyPong** (Nov '20)
Pong game with rasterized graphics, GUI, in game tutorials, VFX, SFX, music, ester eggs and more. Tech: C++, Win32.

» Award(s)

Won µCR, Microcontroller based System & Robotics Hub event Eximietas, 2019

» Courses

- | | |
|-------------------------------|----------------------------|
| Sentimental Analysis | Game Engines(Hazel, Kohi) |
| Procedural terrain Generation | C# Unity Developer 2D, 3D |
| Games with go | Go Bootcamp, and many more |