Twarit Waikar

Portfolio • Github • LinkedIn
wtwarit@gmail.com

SUMMARY

Systems programmer interested in Operating Systems, Computer Graphics, Virtual Reality and Cloud. Eager to learn new technologies. Can search for niche solutions on Google

EDUCATION

B.TECH COMPUTER SCIENCE AND ENGINEERING

CGPA 7.661
Indian Institute of Technology, Roorkee, India (2021)

CBSE 10+2 NON-MEDICAL (COMPUTER SCIENCE)

Boards 95.2%
Delhi Public School, Sector-19, Faridabad, India (2017)

SKILLS

LANGUAGES

Comfortable
Modern C++ 11/14/17, Java, C, Lua, Python, PHP, JavaScript, HTML/CSS
Familiar
TypeScript, CoffeeScript, C#

FRAMEWORKS/LIBRARIES

Comfortable
Win32 API, DirectX 11, OpenGL 3, Unreal Engine 4, SFML, GLFW Terraform, AWS Boto3, GCP Client APIs
Familiar
Unity 3D, Godot Engine, SUMO, ToroPHP, MySQL

TOOLS

Version Control, IDEs (VS, Eclipse, VSCode), CMake, Vcpkg, Windows, Linux, MacOS

EXPERIENCE

CLOUD INFRASTRUCTURE COST OPTIMIZATION Remote Internship

Salesforce Hyderabad 2020

- Implemented a cloud service agnostic, infrastructure crawling framework in Python 3 which crawls GCP and AWS in search of unlabeled, unnecessary resources
- Designed the framework in a manner that it is extensible to any other cloud service with minimal effort

GOOGLE SUMMER OF CODE Student and Mentor

Godot Engine 2019 and 2020

- Developed and now maintaining the complete Version Control systems integration in the Godot Editor
- Integrated Godot's C++ GDNative API with libgit2 which is a re-implementation of Git in C
- Mentored a feature expansion of the VCS Integration project in GSoC 2020

TRAFFIC DRIVING SIMULATOR IN 3D Internship

Robert Bosch, Bangalore 2019

- Created a fully simulated driving environment governed with proper traffic rules in Unreal Engine 4 and SUMO/TraCI
- Procedurally generated the driving arena by taking SUMO road network files as inputs

PROJECTS

ROOTEX 3D GAME ENGINE Advanced 3D Game Engine | Link to code | Link to docs

SDSLabs, IIT Roorkee

- Implemented a DirectX 11 rendering engine in C++ with rendering effects and concepts like materials, particles, dynamic lighting
- Designed the engine around a CPU cache friendly ECS architecture and an ImGui editor GUI
- Created other core systems like Lua scripting using Sol3, audio attenuation using OpenAL, input management using Gainput (XInput)

RUBEUS 2D GAME ENGINE Cross-platform 2D game engine for beginners | Link to code | Link to docs

SDSLabs, IIT Roorkee

- Developed from scratch in C++17, completely solo
- Implemented a 2D rendering engine in OpenGL 3.3 and a 2D physics engine written from scratch using simple collision detection algorithms
- Designed other sub-systems in the engine such as audio, input, asset management, level loading etc.

G FOR GOLF + VR EDITION Gravity based golf game with a VR port | Link to code | Link to game + VR edition

SDSLabs, IIT Roorkee

- Implemented user controlled gravity physics in Unreal Engine 4
- Designed and implemented the VR experience which stood amongst the Top 3 in Microsoft Code.Fun.Do Round 1 Hackathon at IIT Roorkee