Twarit Waikar

Portfolio • Github • LinkedIn
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EXPERIENCE

SOFTWARE ENGINEER II Salesforce Hyderabad, India

June 2021 - Present

- Designed a high performance, open source, C++ 11 based tool that **achieved a 100x performance improvement** over Git. Used by **Sourcegraph** internally. **Link to code**
- Presented in an invitational webinar with Sourcegraph. **Link to video**
- Built a code-searching and indexing service using Sourcegraph, **directly impacted company wide developer productivity** .
- Created automation frameworks, performed maintenance and system administration for Perforce products being used at Salesforce.
- C++, Multithreading, CMake, Go, Python, Perforce

SUMMER INTERN Robert Bosch, Bangalore

2019

- **Integrated a low latency traffic simulation physics engine** called SUMO with Unreal Engine 4 using local network IPC.
- Applied Unreal Engine's procedural generation tools and Blueprint/C++ to create a traffic behaviour data collection virtual environment.
- C++, Unreal Engine C++ and Blueprints

STUDENT AND MENTOR Godot Engine, Google Summer of Code | Code | Docs

Summer 2019 and Summer 2020

- Created and now maintaining the Godot VCS integration to allow users to easily version control their code without leaving the editor.
- Mentored a feature expansion of the VCS Integration project in GSoC 2020.
- C++, CMake, SCons

SUMMER INTERN Salesforce Hyderabad, India

May 2020 - July 2020

- Reduced the cost of infrastructure by implementing a substrate agnostic framework that reports unnecessary resources in GCP and AWS environments.
- Python 3, GCP and AWS/Boto3 client APIs

PROJECTS

HIGH PERFORMANCE C++17 ADVANCED 3D GAME ENGINE

SDSLabs, IIT Roorkee | Code | Docs | Blog

2019 - 2021

- **High performance** achieved through CPU and memory cache efficient ECS and careful memory management in C++ mixed in with a healthy amount of object orientation.
- Designed and implemented a **low memory overhead C++** game engine using DirectX 11 with a Lua scripting API.
- **Ensures low latency** as a goal, while using new and niche GPU computation techniques to improve rendering performance.
- **Fine-tuned performance critical sub-systems** like audio, physics simulation engine, UI rendering, particles engine, etc.
- **Integrated productivity enhancers** like Lua debugging UI, object-oriented Lua
- Featured on YouTube by Gamefromscratch. **Link to video**

VCS INTEGRATION - GODOT GAME ENGINE Code | Docs

Godot Engine, Github

- Maintaining the VCS feature set in the Godot Editor, which is written in C++.
- Fixing user reported bugs and feature improvements.

SUMMARY

Systems programmer and system administrator interested in Operating Systems, Computer Graphics, and Cloud. 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

Proficient

Modern C++ 11/14/17

Comfortable

Python, Go, Java, C, PHP, UE4, Terraform

Familiar

Bash, JavaScript, TypeScript, C#

FRAMEWORKS/LIBRARIES

Comfortable

Win32 API, DirectX 11, OpenGL 3, Unreal Engine 4, Godot Engine, SFML, GLFW, Terraform, AWS Boto3, GCP Client APIs, Helix Core C++ API

Familiar

Unity 3D, SUMO, ToroPHP, MySQL, Docker, OpenStack

TOOLS

Docker, Terraform, Version Control (Git, Perforce), IDEs (VS, VSCode, Eclipse), CMake, SCons, Vcpkg, Windows, Linux, MacOS

OPEN SOURCE

godotengine/godot VCS maintainer
godotengine/godot-git-plugin Maintainer
salesforce/p4-fusion Maintainer
sdslabs/Rootex Lead developer
sdslabs/Rubeus Lead developer

LATENT SKILLS

Very high communication skills.
Taking full service ownership.
Writing over-compensating documentation.