

## 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, Lua, Unreal Blueprint, Python, Java, C, PHP, JavaScript, HTML/CSS

Familiar

TypeScript, CoffeeScript, C#

### FRAMEWORKS/LIBRARIES

Comfortable

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

Familiar

Unity 3D, SUMO, ToroPHP, MySQL

### TOOLS

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

## EXPERIENCE

### SOFTWARE ENGINEER ASSOCIATE MEMBER OF TECHNICAL STAFF

Salesforce, Hyderabad since June 2021

- Created a **C++ tool** called p4-fusion to convert Perforce depots to Git repositories **about 100 times faster** than the official Git based solution.
- Open sourced p4-fusion under BSD-3 in the Salesforce Github organization. [Click here to view the code on github.com/salesforce](#).
- Collaborated in **building proof of concepts of developer tools** to support the developers at Salesforce.

### 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 2019 AND 2020 VERSION

CONTROL SYSTEM INTEGRATION | [CODE](#) | [DOCS](#)

Godot Engine

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

### 3D TRAFFIC DRIVING SIMULATOR IN UNREAL ENGINE 4

INTERNSHIP

Robert Bosch, Bangalore 2019

- Integrated a traffic simulation engine using proper traffic rules called SUMO in **Unreal Engine 4** which used the **SUMO/TraCI API**
- Applied Unreal Engine's user interface and **procedural generation** tools to create a traffic behaviour data collection virtual environment

## PROJECTS

### ROOTEX ADVANCED C++17 3D GAME ENGINE [CODE](#) | [DOCS](#)

SDSLabs, IIT Roorkee

- Designed the **C++** engine with a **Lua scripting API** with a modified **impure-ECS design** and a **Dear ImGui** editor GUI
- Implemented the Event Manager, **Multithreaded** resource loading, **OpenAL** Audio engine, **Bullet Physics** integration, Overlay system using **HTML/CSS/Lua**, etc.

### RUBEUS C++17 SIMPLE 2D GAME ENGINE [CODE](#) | [DOCS](#)

SDSLabs, IIT Roorkee

- Implemented a 2D rendering engine in **OpenGL 3.3** and a **custom 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.