Sushant S Samuel

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EXPERIENCE

Dreate XR, New Delhi
— Co-Founder & CTO

Jan 2023 - PRESENT

Dreate XR is a bootstrapped agency which uses immersive technologies such as **AR** and **VR** to create stunning experiences for brands on Web and Social Media Platform.

Developed "Voxle" an open-source software which converts any 3D model into React JSX component to be directly used in Web based XR application. The software supports mesh compression, geometry instances to remove duplicates, texture compression and draco file compression for gltf file formats.

Cisco Systems India Pvt Ltd, Bangalore
— Software Engineer @ Data Center BU

Aug 2018 - Jan 2023

Developed a consistency checker module to determine inconsistencies between the hardware and the runtime configuration data stored in the kernel **using C**.

Designed and developed telemetry module for Port Manager for physical port analytics **using Cpp**.

Was part of the smart licensing feature for the hardware ports of Cisco's new switching platforms and also worked on VM Identification Server feature for Data Center switches, which was written **in C**.

Worked on UT Automation for Port Manager (**using Python**) and also Documentation Automation software (**using NodeJS, React and MongoDB**)

Currently owner of infrastructure modules such as Port Manager, Fport Server and Port Channel Manager.

Université de Bretagne-Sud, France
— Internship @Lab-STICC - Project RELIASIC

May 2017 - Jul 2017

Project RELIASIC is an implementation of a Fault Tolerant Tracking Algorithm on an FPGA board for its realization as an ASIC Chip.

Both the boards were programmed **using Verilog** with a Bare-Metal code running on the ZynQ Processing Unit, which communicates with Matlab for data acquisition written **in C**.

SKILLS

Programming: Node JS, Javascript, React, Tailwind CSS, Typescript, Cpp, C, Python,

Certifications

Meta certified AR Creator

EDUCATION

BTech in Electrical Engineering - 7.7 CGPA - IIT Roorkee

All India Senior Secondary School Examination (12th) - 95% - CBSE

All India Secondary School Examination (10th) - 10 CGPA - CBSE

Designed the testbed for data acquisition from ML605 to Zedboard, these signals were then sent to the ARM processing unit in the Zynq board. The ARM processing unit was connected to Matlab and received commands such to enable and disable fault injections and to use the received GPS signals to plot the error correction in Google Maps.

Demo was displayed in SIPS 2017 Conference – Paper

PROJECTS

Voxle

Voxle is a 3D utility app designed for real-time viewing and analysis of models and animations. It offers insights into mesh details like vertex and triangle counts, as well as performance metrics including FPS, memory usage, and drawcalls. Perfect for quick and efficient 3D analysis.

The 3D models can be directly exported to React components with draco compression and geometry instances to avoid duplications.

Link

Ilocate

A web app which helps in determining the locations of gas-stations along a long distance journey. The gas-stations are located at the edge of state boundaries (This project is a work in progress POC where we determine the gas-stations to fill up the vehicles to minimize the cost of fuel, currently the web app only supports indian cities)

Link

Username - admin@ilocate.com

Password - ilocate@14115126

Ezgit — 2023

Ezgit is simple tool to streamline your git process. It uses OpenAI to refactor code and auto-generate git messages.

SDR Software with Real Time Signal Alignment for Analysis and NMSE Calculation — 2018, IIT Roorkee

Designed and Developed a stand-alone window's based software to connect with AD devices and chipsets such as AD9xxx series and PlutoSDR.

The software was developed **using Python** and currently supports signal generation, reading data from .mat files, real-time signal alignment, multiple time, and frequency plots, and NMSE calculation.

Implementation of Wireless Communication link using NI USRP Platform using GNURadio — 2017, IIT Roorkee

This was an academic project, involving the complete hardware and software architectural study of the Software Defined Radios, NI USRP 2921

were used for this project.

The main highlights of the project were - Analyzing a detailed architecture of the SDR with a description of the data flow in both hardware and software parts, Study of the various modulation techniques currently used and its applications such as transmission of Real-time Audio, Real-time Video and Data Files wirelessly.

Robocon 2017 | Team Robocon IITR — 2017, IIT Roorkee

Robocon 2017 consisted of a match between robots of two teams in which the teams had to throw frisbees on given platforms in a given time limit of 3 minutes. Our team designed a four-wheel mecanum chassis with two vertical frisbee throwing mechanisms. We designed our own custom PCBs for incorporating the sensors and the Arduino microcontroller. The navigation of the robot was achieved using LSA Auto-calibrating line sensors.

Robocon 2016 | Team Robocon IITR — 2016, IIT Roorkee

The theme for Robocon 2016 was "Clean Energy Recharging the World". Teams were required to design two robots, a hybrid robot (with an energy source) and an eco robot (without any energy source). My major contribution was in the making of Eco-bot using color-sensors (TCS3200).

I was involved with both the electronics and the control of the Eco-bot. Eco-bot used an array of 5 sensors on a custom made PCB and two auxiliary sensors on the outer of the robot for specific functions- arena color detection, reconfiguration of the middle sensors and T junction detection.