

Siddharth Chillale

Graphics Programmer

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TECHNICAL EXPERIENCE

Data Analyst Intern, Shaadi.com, Remote

04/2020 - 06/2020

- Built an end-to-end pipeline for extraction, parsing and transformation of **300+** reports and loading into a visual frontend for analysis on domestic and international flights for the past 4 years.
- Improved workflow efficiency by **20%** through automating pipeline for transformation from PDFs to CSVs.
- Analyzed data of Airports Authority of India (AAI) to gauge the effect of the COVID-19 pandemic on the economy of air travel.

PROJECTS

PathTracer with Global Illumination under Dr. JingJing Meng

09/2021 - 12/2021

- Implemented Monte Carlo path tracing for global illumination.
- Rendered realistic illumination of models using Lambertian and Specular Lighting Models.
- Rapid rendering of materials with different reflection and refraction models.

MeshEditor under Dr. JingJing Meng

09/2021 - 12/2021

- Developed local mesh operations including vertex operations, edge operations, face operations.
- Developed global mesh operations such as loop subdivision and triangulation.

Blocky's Revenge: 2D Platformer game

07/2021 - 08/2020

- Developed a 2D platformer game using the Godot Game Engine under a managed timeline of **2 weeks**.
- Created custom Art assets including player, enemy characters, items, HUD UI elements and integrated into gameplay.
- Shipped the game to itch.io reaching nearly **540** views and **170+** downloads with ports to Windows, Android, Mac and Web.

Relational Database Engine (Taco-DB) under Dr. Zhuoyue Zhao

02/2022 - 05/2022

- Implemented Database Storage Managements system, Query Processing and Query optimization.
- Developed Transaction processing, concurrency control and recovery in a relational database system.

Stanford PintOS operating system under Dr. Farshad Ghanei

09/2021 - 12/2021

- Implemented priority scheduling, priority donation using MuliLevel Feedback Queue System for kernel threads.
- Accomplished support for user programs by implementation of kernel system calls and a virtual file system.
- Developed operating system components for execution of multi-threaded programs.

TECHNICAL SKILLS

Languages and framework - C/ C++ (proficient) , Python (fluent), SQL (prior experience), HLSL

Software Libraries - Direct3D 11, Win32, COM, OpenGL

Software Tools - Git, MSVC, Linux, Windows, MATLAB, GDB

Game Engine - Unreal Engine 4, Godot game engine

EDUCATION

University at Buffalo, The State University of New York, NY

2021- 2023

Masters in Computer Science [3.4/4.0 GPA]

Coursework - Computer Graphics, Operating Systems, Distributed Systems, Analysis of Algorithms, Processing Strings and Sequences

Indian Institute of Information Technology, Tiruchirappalli (IIIT), Trichy, India

2017-2021

Bachelor of Technology in Computer Science [8.5 /10 GPA]

Coursework - Database Management Systems, Design and analysis of parallel algorithms, Computer Architecture, Principles of compiler design

VOLUNTEER WORK

- Introduced around **20** professionals from diverse fields to programming with python under Dr. Jyotikrishna Dass at Texas A&M University, TX. Assisted in organizing the curriculum and preparation of the course materials.
- Co-founded HacktoberFest chapter at the Indian Institute of Information Technology, Trichy, TN, IN and mentored **~50** individuals towards open-source contribution.

CERTIFICATIONS

Deep learning specialization, Deeplearning.ai, Coursera

05/2020

Machine Learning, Stanford, Coursera

01/2020