RASHI SINHA

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COURSEWORK

- Computer Graphics
- Multimedia Systems Design
- 3D Graphics & Rendering
- Analysis of Algorithms
- Advanced Mobile Devices and Game Consoles
- Advanced Game Projects (AGP)
- Computer Animation and Simulation

SKILLS

Programming

- Python • C • C++
- OpenGL • HLSL
- USD • C# • Java
- HTML5 • CSS
- PLSQL

Tools

- Autodesk Maya
- Blender 2.8 • Unity
- Github • Perforce
- JIRA • Miro

PERSONAL PROJECTS

Drive
Low-poly 3D Animation
(Autodesk Maya 2019)

Paranormal
Low-poly 3D Animation
(Blender 2.8)

INVOLVEMENT

- Women in Animation at USC, Student Club, Lead (2022-2023)
- USC SIGGRAPH Club, Member

EDUCATION

Master's in Computer Science (Multimedia & Creative Technologies)

University of Southern California | *GPA : 3.81* | *Graduation Date : May, 2023*

Bachelor's of Technology in Computer Science

Manipal University Jaipur | *CGPA : 9.26* | *Graduation Date : Jul, 2018*

PROJECTS

Motion Capture Interpolation | *Computer Animation & Simulation*

Implemented Linear and Bezier interpolation techniques on motion capture data for Euler angles and Quaternions. **(C++, OpenGL)**

3D Rasterizer | *3D Graphics and Rendering*

Developed a 3D rasterizer without using graphics libraries. Implemented wireframe & stylized rendering techniques (toon shading, line art & halftone). **(Python)**

Jello Cube | *Computer Animation & Simulation*

Implemented mass-spring system to simulate a 3D elastic cube including collision detection and its impact along with external force field. **(C++, OpenGL)**

Blindsight: War of Wardens | *USC, AGP - Technical Artist*

Implemented custom lighting & created stylized manga-like shader graphs for environments in a 3D third-person combat game. **(Unity, Shader Graph, HLSL, C#)**

Roller Coaster | *Computer Graphics*

Created a first-person roller coaster simulation by implementing Catmull-Rom splines to procedurally generate the track and animate the camera. **(OpenGL, C)**

EXPERIENCE

CG Tech Art Intern | Soul Machines

Jun, 2022 to Aug, 2022 | Los Angeles, California

- Explored feasibility of introducing Universal Scene Descriptions (USD) within the Digital People production pipeline
- Authored scripts to create textured USD assets from the existing Digital People asset database.
- Developed a tool for visual validation of USD assets in Autodesk Maya

Course Grader | Viterbi School of Engineering, USC

Aug, 2021 to May, 2023 | Los Angeles, California

ITP 215 (Introduction to 3D Modeling, Animation & Visual Effects)
ITP 361 (Character Rigging for Games).

- Assisted professor during lectures & labs. Graded assignments & managed logistics for the class.
- Provided support to non-technical users in resolving Maya specific issues.