Jaejun Jang

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+Skills

PROGRAMMING LANGUAGE

C++ C C#
GLSL HLSL
PYTHON

FRAMEWORK

OpenGL Unity
Vulkan DirectX 12

TOOL

Git SVN
Visual Studio
RenderDoc
PIX Vim
Visual Studio Code
GDB

+Education

DigiPen Institute of Technology

Bachelor of Computer Science in Real-Time Interactive Simulation

+Employment

Digipen Institute of Technology
September 2020 to Current

Redmond, WA

Teaching Assistant

Teaching Assistant at "Advanced Computer Graphics I" class.

+Projects

Bibim renderer
September 2020 to Current

3D rendering engine with Vulkan and GLSL.
- Implemented GPU instanced render.
- Implemented deferred rendering pipeline.

Animation previewer
September 2020 to Current

3D animation rendering software with C++ and DirectX 12.
- Implemented skeletal animation playback using FBX file format.
- Added custom math library for vector and quaternion computations.

Rendering engine
September 2019 to October 2020

Written in C++ with OpenGL and GLSL.
- Implemented Phong shading, cube map reflection, moment shadow map, PBR, IBL and SSAO.
- All implementation based on original research paper except for unreal engine 4 light model for PBR
- Up to 1024 local lights.
- Created real time ocean rendering scene.
- Wrote C# graphing application with C#, features B-spline, Bazier curves with De Casteljau and De Boor's algorithm.

Image Processing Project
January 2020 to May 2020

Image processing software with C++, OpenGL and GLSL.
- integrated custom console to load, save, and process image file.
- Built arithmetic operations such as addition, subtraction, multiplication, square and inverse.
- Built complex operations such as log transformation.
- Implemented image transformation, histogram equalization, histogram matching, Gaussian blur and discrete Fourier transform

Bark n' time
September 2019 to April 2020

Third-person puzzle game project developed by Unity.
- Participated as generalist programmer.
- Created cinematic camera for dialogue scene.
- Implemented camera behavior using whisker ray casts.
- Developed item carry system for puzzle solving.

HON
September 2018 to May 2019

2D platformer action game
- Worked as graphics programmer.
- Displayed at G-star and Global Game Challenge2019.
- Implemented GPU particles.
- Built post processing.
- Developed debugger for collision bounding box, texture and particles.