# **PHUONG (AIRI) PHAM**

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#### **TECHNICAL SKILLS**

Python, C, C#, C++, Unity, Unreal, Maya, Nuke, Photoshop, OpenGL, DX11, GLSL, HLSL, GitHub, Perforce

#### **EDUCATION**

# University of Southern California

Los Angeles, CA

August 2020-Present

BS GPA: 3.8. / MS GPA: 4.0

### **INTERNSHIP EXPERIENCE**

#### **Respawn Entertainment - Electronic Arts**

Los Angeles, CA

# Technical Artist Intern | Demo

May 2024-August 2024

- Engineered an Assets Library in Unreal for artists to obtain and inspect assets across multiple titles in the Star Wars franchise
- Leveraged Unreal Blueprints and C++ to add key features such as shop cart user interface, examine mode for meshes and maps, teleportation to objects, and props collection list
- Collaborated with Respawn Technical Art Director to design UI/UX, data flow schemes, and write Unreal utility tools that ensure a smooth user experience and seamless connection with EA Shared Assets Library

#### PROFESSIONAL DEVELOPMENT

**The Veiled Ones** 

Los Angeles, CA

Technical Artist | Demo

September 2023-August 2024

- Utilized Unity HDRP shader, VFX, and post-processing tools to develop special particle and full-screen visual effects in gameplay and cinematics that enhance the game's horror aesthetics
- Designed environmental and interior lighting work along with a flashlight mechanic that adjusts brightness according to screen luminance with GPU compute shader
- Led efforts with interdisciplinary teammates to document, debug, and optimize performance in Unity HDRP pipeline, reducing the draw steps by 50%

#### Lanesplitterz

Los Angeles, CA

### VFX Technical Artist | Demo

May 2024-Present

- Implement a comic toon post-processing effect with outlines based on depth, normal, and color using Unity URP shader graphs and HLSL
- Cooperate with the Art Director to design and create stylized VFX for impact, launch, and smoke effects with Unity Particle Systems and VFX/Shader graphs

#### **PERSONAL PROJECTS**

#### Interactive Real-time Grass

September 2024-Present

 Program a responsive and procedural real-time grass system with physics simulation and culling using Unity URP in HLSL shaders such as vertex, fragment, and compute shader

#### Renderer From Scratch | Demo

December 2023-January 2024

• Developed a C++ rendering pipeline capable of parsing .obj files, display 3D objects using the Gouraud shading technique (including diffuse, specular, and ambient lighting), with support for normal, glow, shadow mapping, and gamma correction

#### **ACADEMIC PROJECTS**

# Inverse Kinematics with Skinning | Demo

Los Angeles, CA

### **CSCI 520: Computer Animation**

April 2024-April 2024

Implemented the algorithm for skinning, forward kinematics, and inverse kinematics to deform arbitrary 3D characters in C++

### DX11 3D Game Engine | Demo

Los Angeles, CA

## **ITP 485: Programming Game Engines**

March 2024-March 2024

Built a 3D game engine in C++ & DX11 API with fundamental subsystems like rendering, animation, physics, and post-processing

# OpenGL Ray tracer | Demo

Los Angeles, CA

#### **CSCI 420: Introduction to Computer Graphics**

March 2023-March 2023

Made an OpenGL ray tracer for rendering opaque objects from 3D intersection calculations, Phong shading, recursive reflection