Saranya Sampath

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EDUCATION

UNIVERSITY OF PENNSYLVANIA — Grad: 2021
- B.S.E. in Computer Science (Digital Media Design), Minor in Fine Arts
- M.S.E. in Computer Graphics and Game Technology

SAVANNAH COLLEGE OF ART AND DESIGN — Grad: 2016
- Full Merit-Based Scholarship, Received 2 course credits

SKILLS

CODING C#, C++, Python, Java, Git, OpenGL/GLSL, Unity3D, Unreal Engine, TypeScript, WebGL, SQL

DESIGN Maya, Mudbox, ZBrush, Clip Studio Paint, Adobe Illustrator, ToonBoom Harmony, Houdini (beginner)

EXPERIENCE

GRAPHICS ENGINEER, TERRAIN TEAM — SEPT 2021 - NOW
Unity Technologies
- Implemented features to support Terrain Tools package in Unity3D using C# and C++
- Fixed bugs relating to terrain rendering, player builds involving detail meshes/grass textures, and UI code
- Refactored a major part of the Terrain system to allow for building new types of terrain painting tools and improved painting workflows for a better authoring experience for environment artists

GRAPHICS ENGINEER INTERN, TERRAIN TEAM — JUN 2020 - AUG 2020
Unity Technologies
- Allowed users to apply custom materials and shaders to the terrain details system by creating a new renderer in C++ which supports rendering materials per submesh
- Updated the terrain details job system to send materials and combined meshes to the newly implemented renderer

VICE PRESIDENT, UPENN SIGGRAPH CHAPTER — SEPT 2018 - SEPT 2021
University of Pennsylvania
- Organized weekly workshops, tutorials, and panels. Topics: computer science, animation, games, VFX, and graphics

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PROJECTS

PROCEDURAL DUNGEON GENERATOR — JAN 2021 - MAY 2021
Unity, C#, HLSL
- Implemented 2D/3D dungeon tool in C# through Binary Space Partitioning Tree algorithm for room/corridor generation
- Users can modify multiple parameters like dungeon size, corridor thickness, type of noise applied, and tile prefabs
- FBM noise and UV warping applied through calculating SDFs in HLSL to create organic room shapes

PROCEDURAL MODELING OF BUILDINGS AND CITIES — JAN 2021 - MAY 2021
Houdini, Python, Maya
- Created a Houdini tool to dynamically change parameters like number of floors, scale of walls, and shape iterations to create buildings using the L-System procedural method
- Implemented a Shape Grammar parser in Python to output OBJ files to Maya. Created 10 custom shape grammar rules, created 3 building types, and modeled 6 Maya OBJs as building blocks for each building.

CROSSY ROADKILL — AUG 2020 - DEC 2020
Unreal, Blueprint Visual Scripting
- Collaborated in a team of 3 to create a video game in Unreal using Blueprints in which the player drives on an infinite road, avoiding obstacles and gathering power ups to crash into as many animals as they can
- Modeled powerup/obstacle assets, implemented infinite road spawning, the points and lives system, and collaborated to implement the physics/collision logic for animals and the spawning system

MINI-MAYA — AUG 2019 - DEC 2019
C++, OpenGL, QtCreator
- Created a mini version of Maya by implementing skeleton skinning, extrude face, Catmull-Clark subdivision of meshes, and OBJ file importing using C++ and OpenGL