



# Rui "Siri" Xie

## Gameplay Programmer



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## LANGUAGES

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- C/C++
- C#
- OpenGL / GLSL
- Python
- XML
- JSON

## SOFTWARE

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- Visual Studio 2017
- Unity 5
- Unreal Engine 4
- RenderDoc
- Perforce
- Git
- Hansoft
- Visio

## HIGHLIGHTED SKILLS

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- Game Engine Architecture
- Software Engineering
- Data Driven Game Design
- Gameplay Prototype
- Data Oriented Design
- Object Oriented Programming
- Memory Management
- Data Structure
- Unreal Blueprint
- 3D Math
- Linear Algebra
- Agile Development
- Source Control

## EDUCATION

**The Guildhall at Southern Methodist University**  
Master of Interactive Technology, Digital Game Development

**MAY 2019**

**Beijing University of Posts and Telecommunications**  
Bachelor of Engineering, Computer Science and Technology

**JUL 2017**

## TEAM PROJECTS

### Interstellar Racing League

**5 MONTHS, 2018**

Physics Programmer | Team of 55 Developers ( 15 programmers)

- Designed vehicle blueprint component-based architecture
- Created and refined vehicle's physics model using customized gravity, stability and suspension components
- Assisted with implementing and binding track features including boost and knock pad to event dispatchers
- Assisted with improving car feel using physics materials and collision box

### Feline Friendship Force

**4 MONTHS, 2017**

Programmer | Team of 5 Developers ( 2 programmers)

- Implemented the node-edit tool for level designers to make levels
- Designed enemy AI state machine and transitions
- Designed and implemented visual effects and sprite animations in the reward scene

## INDIVIDUAL PROJECTS

### RayX Engine

C++ | OpenGL

- Developed using C++ 11, OpenGL 4.2 and Visual Studio 2017
- Supported rendering features including OpenGL context creation, data-driven shaders and materials, mesh builder, kerning fonts, orthographic and perspective camera, sprite animations, forward rendering path, multi-type light, post-processing image effects
- Supported keyboard & mouse, and Xbox controller input
- Developed own 3D math library and 3D transform hierarchy
- Supported debug draw system, built-in command console, built-in profiler, nested clocks, multi-thread logger

### GameBuilder

C++ | OpenGL

- Designed to author many 2D tile-based games with XML data files easily
- Developed event system to handle message transmission between entities
- Created property tree structure to support data-driven gameplay

## PROFESSIONAL EXPERIENCE

### 7D Studio

**3 MONTHS, 2016**

Unity Programmer

- Commissioned by China International Publishing Group and developed a VR App on HTC Vive, Android and iOS platform
- Utilized Unity and C# to implemented UI interaction in VR and collaborated camera movement with tween system

### HTC Vive

**3 MONTHS, 2016**

Viveport Intern

- Developed a scripting program using Python with Selenium and BeautifulSoup 4 to simplify user comments extraction process
- Assisted with CDN configuration, performance test and migration which helped developers launch applications on Viveport