Yifei Yan

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Technical Artist | Graphics Programmer | Github | itch.io

Education

University of Skövde | Sweden
Masters of Game Development
2021-2023   Grade A

### Jiang Nan University | China
Technology of Digital Media
2017-2021   GPA 3.67 / 4.00

University of the Arts London | England
Fine Arts and Design (Exchange)
2019/8-9   Grade A*

Skills

- Unity and Unreal Game Engine Development
  Shader, Custom Editor, Asset creation and editing, etc.

- Unity Editor Tool Dev
  Custom Inspector, Editor Window, Scene GUI tooling experiences

- Unity C# Development
  Game system, logic, and interface development

- Game Prototyping
  Playtesting, Agile development、Game analysis and design

- Procedural Content Generation
  Houdini，Substance Designer
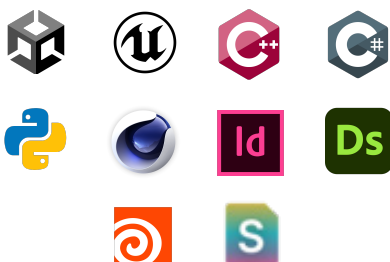
Summary

- 3 years of Unity dev experience including UI, Character Control, Game System, Shader, Tool Dev, etc.
- Keen on refining game system and building shader library, Github Page .
- Board experience with real-time rendering techs, such as vegetation, water body, global wind, VFXs, volumetrics, and so on.
- Focusing on cutting edge rendering, such as Real-time Rendering and GDCs.
- Life-long gamer, love to play stylized game, open-world game, action game, and indie games.

Projects

God of War Global Wind System in Unity URP - Link
Researcher & Developer | 2022.5 - 2022.6

- Wind Injection, Diffusion, Advection Algorithms implementation via compute shader.
- World space in-game 3D Wind Debug and 2D Post Processing Wind texture slice Debug.
- Ping Pong RT Buffer and Int To Float to support Compute Atomic Add.
- Three sets of compute shader calculating wind axises, improving GPU utilization.
- Wind controller and Wind contributor scripts, parameter visualization in scene.

Simulation and rendering of interactive Grass, Water, and Cloth in Unity URP - Link
Researcher & Developer | 2020.12 - 2021.5

- Water rendering based on PBR, depth calculation, planar reflection, and Ramp Texture.
- Heightfield water simulation based on graphics blit affecting water normal and vertex.
- Fake 3D wind via 2D Texture Noise and 1D Offset, as well as dynamic flag shader.
- Geometry Grassland Shader development, collision and wind interaction.
- Grass point cloud mesh paint tool designed for artists, brush affecting Mesh Vertex Data, supporting Add/Remove/Edit/Smooth operations and Undo/Redo, Scriptable object brush setting inspired by Poly Brush.

Shader and Code library development in Unity URP - Link
Researcher & Developer | 2021.9 - 2022.5

- Summaries and classifications of common shaders in game, refinement on reusable shader and codes, such as Hash functions, Shading models, and Utility tools.
- Implementation of various shaders including object vfx, post-processing, volumetrics, and so on, paired with showcase scenes.
- Custom Shader Editor designed for fast iterations, custom shader property dictionary based on Unity Editor Prefs.
- Art-related tool development, such as Ramp Texture Generator, Texture Channel Mixer and custom Material Property Binder inspired by Unity VFX Graph.

Design and Development of various game projects
Designer & Programmer | 2019.7 - 2021.6

- Bachelor graduation game project - 3D puzzle-solving platformer - Re:Trace
- CIGA Game Jam - Action puzzle-solver game - Cleaner
- Taptap Game Competition - 3D Artistic Platformer - Dreams
- Bachelor game project - Risk of Rain 2 Mock Up
- Game dev workshop - Topdown shooter - Reflection