



# TECHART PORTFOLIO

Diyang Zhang



# PROJECTS

The background is a light mint green color. It features several decorative elements: a purple outline of a triangle in the top right; a purple outline of a square in the bottom center; a purple outline of a circle on the left side; a purple outline of an 'X' on the right side; and several small, four-pointed purple starburst shapes scattered throughout. There are also several solid light green circles of varying sizes, some partially cut off by the edges of the frame.





## **TurboForge**

*An Immersive Car Crafting Simulator in AR/VR*

With Xinyue Liang and Hongxiao Zheng

Made with Unity3D URP × Meta XR  
SDK × XR Interaction Toolkit





## Main Contributions:

- Unity XRI × Meta XR Building Blocks basic setup
- Models migration: material & textures optimizations
- Select-and-Hold interaction system with animations
- Physical objects layering
- Audio system
- Video Trailer and teaser editing





## **Octosquishy**

*A Unity3D Side-Scrolling Third-Person  
Game Project*

Independent Project

Made with Unity3D URP





## Main Contributions:

- Third-person movement control
- Bullet system
- HP system
- Conditional MP increase
- Special Attack
- Animations





## Walk Your Cat!

*A Mixed Reality Experience with Laser Pointer and a Cute Cat*

With Nate Gordon (Designer)

Made with Unity3D URP × Meta XR  
SDK × XR Interaction Toolkit






## Main Contributions:

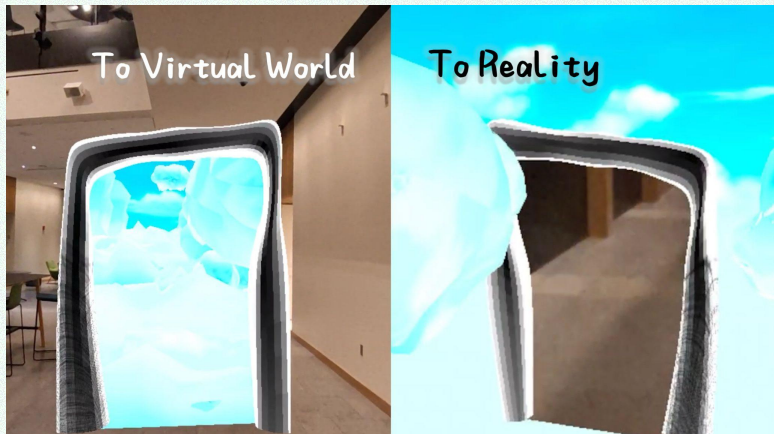
- Ray Interactions
- Cat's *infinite-chasing* mechanic
- Cat's *jump-to-portal* automatically detectable event
- Portal triggering
- Scene transfer by player's *entering* event
- Animations migration to Unity





# LIGHTWEIGHT PROJECTS





## Heaven's Gate

- Stencil Buffer
  - objects layering
  - Double-sided passthrough
  - Additional treatment for hidden Skybox

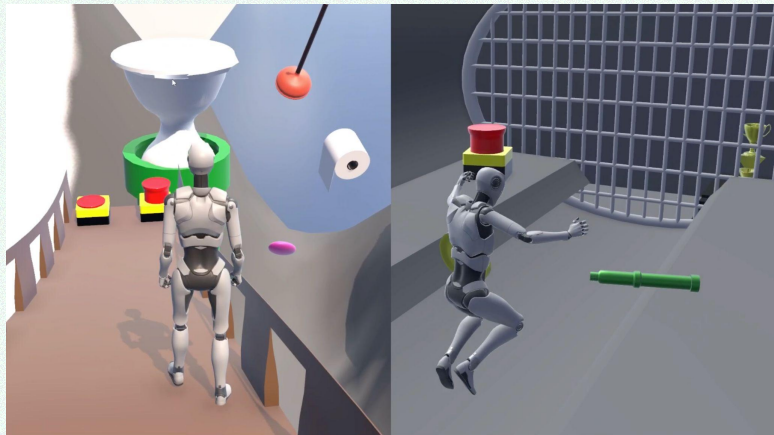




## Coral GenEngine

- Generative Engine which enables:
  - Add and remove
  - Random textures
  - Random scales
  - Random rotations





## The Toilet

- Unity Basics
  - Interactive button
  - On-Trigger animations
  - Collection system
  - Attaching system



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# MORE SELECTED WORK SAMPLES

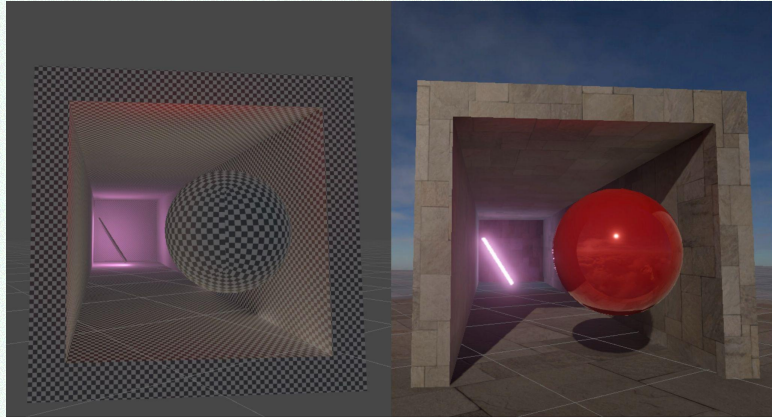




## Particle VFX

- Customization





## Light Baking

- Emission and Reflection





# THANKS!

For more information,  
please refer to my personal webpage:  
<https://serev99.github.io/TechArt/>

