

Tianyi Zhao

Software Engineer & Game Developer

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Portfolio: <https://ziutinyat.github.io>

Education

Carnegie Mellon University (CMU)

Master in Entertainment Technology

Pittsburgh, PA

09/2017 – 05/2019

- Projects: 4D Engine, Maxis VR, Alice Adventure
- Computer System, Computer Graphics, Technical Animation, BVW

The Hong Kong Polytechnic University (PolyU)

BSc in Internet and Multimedia Technology

Hong Kong, China

09/2013 – 05/2017

- PC Game development, Object-Oriented Programming, Mobile Application Development, Web System Development

University of Central Florida (UCF)

Department of Computer Science (exchange)

Orlando, FL

09/2015 – 12/2015

- Communication Networks, Computer Security

Experience

Visual Concepts (2K)

Software Engineer, full-time employee

Novato, CA

08/2019 – present

- Participated in development of NBA2K20, NBA2K21, NBA2K22
- Collaborative debugging, developing in-game tools, implementing game features

CMU Perceptual Computing Lab

Research Assistant

Pittsburgh, PA

05/2018 – 05/2019

- Developed the OpenPose Unity demo for CVPR 2018
- Developed and maintained the Unity plugin for popular open-source project OpenPose

Halite Games Studio

Co-founder, Level designer, Programmer

Hong Kong, China

03/2017 – 03/2018

- Designed and shipped hard-core puzzle indie game “Ripple Blossom”
- Won the “Best Theme Integration” Award in Global Game Jam 2017 Hong Kong.

Projects

4D Engine (Unity VR demo)

Individual developer

CMU

01/2019 – 05/2019

- Conducted 4D mathematical equations and implemented 4D transformation system
- Constructed 4D mesh structure and projection pipeline
- Developed a VR demo in experience of 4D space

Computer Graphics (C++ Rendering and Animating)

Programmer

CMU

01/2018 – 05/2018

- Implemented ray-tracing rendering system with BRDF
- Implemented skeletal animation with skinning and inverse kinematics
- Implemented mesh editing operations including extrusion, subdivision etc.

Alice's Adventure (Software development)

Lead programmer, front-end developer

CMU

01/2018 - 05/2018

- Developed an adventure game creation tool to teach programming and game design
- Designed and implemented the block-based coding editor
- Designed system architecture and integrated sub-systems

Skills

Professional programming in **C++, C#, JavaScript, Java, SQL**

Proficient in **Unity 3D, Visual Studio, Git, Perforce**

Master of problem solving in Mathematics, Physics

Languages: English (proficient), Chinese (native), Cantonese (intermediate)

Experienced music composing and editing, piano performance