Tianyi Zhao

Software Engineer & Game Developer

Email: ziutinyat@gmail.com
Phone: +1 (412) 503 2371
Portfolio: https://ziutinyat.github.io

Experience

Visual Concepts (2K)
Novato, CA
08/2019-present
Software Engineer, full-time
- Participated in development of NBA2K20, NBA2K21, NBA2K22
- Current owner of "Director", the data-driven scripting tool and in-game event system
- Developed the designer tool for manipulation of location marker system
- Implemented open-world activities and various UI overlays

CMU Perceptual Computing Lab
Pittsburgh, PA
05/2018-05/2019
Research Assistant
- Developed the OpenPose 3D pose reconstruction Unity demo for CVPR 2018
- Developed the Unity plugin for OpenPose on GitHub (520 stars)

Halite Games Studio
Hong Kong
03/2017-03/2018
Co-founder, Level designer, Programmer
- Designed and shipped hard-core puzzle indie game "Ripple Blossom"
- Won the "Best Theme Integration" Award in Global Game Jam 2017 Hong Kong.

Education

Carnegie Mellon University (CMU)
Pittsburgh, PA
09/2017-05/2019
Master in Entertainment Technology
- Projects: 4D Engine, Maxis VR, Alice Adventure
- Courses: Computer System, Computer Graphics, Technical Animation, BVW

The Hong Kong Polytechnic University (PolyU)
Hong Kong
09/2013-05/2017
BSc in Internet and Multimedia Technology
- Object-Oriented Programming, Mobile Application, Web System, AI
- Exchange student to University of Central Florida (UCF)

Projects

4D Engine (Unity VR demo)
CMU
01/2019-05/2019
Individual developer
- 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)
CMU
01/2018-05/2018
Programmer
- 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)
CMU
01/2018-05/2018
Lead programmer, front-end developer
- 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