Yining **Zhang**

Los Angeles, California · Computer Science Games

(+1) 213-378-4053 | yiningzhang99@outlook.com | yiningzhang99 | yiningzhang99

Education

University of Southern California *Jan 2019-Dec 2021*

Viterbi School of Engineering, B.S. in Computer Science Games *GPA:3.91/4.0*

Related Courseworks: Data Structures, Computing Algorithms, Game Programming, Game Engine, Multiplayer Programming, Computer Graphics, 3D Animations, Computer Graphics, Computing Systems, Inter-networking, Operating Systems, Game Design, AI, Software Development

Skills

- **Programming Languages:** C/C++, C#, Java, Python, JavaScript, HTML, css, php, jsp, LaTeX
- **Tools:** Unity, Unreal Engine 4, SDL, DirectX 3D 11, OpenGL, Git, Linux/Ubuntu, Maya

Work Experience

Tencent Games *June 2021 – Aug 2021*

Game Client Engineer *Shenzhen, China*

Work in the AI group of *Arena Breakout* Project from *Morefun* Game Studio.

- Read and understand source code about Behavior Tree, AIController, EQS, Navigation System and Texture Streaming. Finish patrolling, chasing, attacking and escaping behvior of NPC.
- Use UE4 to make a 3D SideScroller Puzzle Game independently about environment deep interactions in 4 weeks. Implement climbing system, light monitoring and Enemy AI.

NetEase Games *June 2020 – Aug 2020*

Game Engine R&D Engineer *Hangzhou, China*

Work for *Neox* Game Engine Team. My project is to use Unity and DX11 to implement interactive snow texture in 3A games by 2 different methods:

- One is from *Batman: Arkham*, which uses depth cameras to catch objects' depth and render dynamic heightmap;
- The other is from *Rise of the Tomb Raider*, which uses Compute Shaders to calculate snow's height according to objects' height and record in dynamic heightmap.

Heitao Interactive Network Technology *June 2019 – Aug 2019*

Back-end Development Engineer *Shanghai, China*

Use PHP, JS and HTML to add new functionalities to back-end servers of a popular mobile game in China called Date-Alive:

- Show tables from databases on web-pages and develop add, edit and delete functions for operation group to manage game announcements displayed to users. Enable their operations to appear on homepage and in games immediately.
- Implement inspecting pages with functions for colleagues to manage and filter pictures uploaded by players in petition events.

TogeData *May 2018 – Dec 2018*

Data Analyzer *Shanghai, China*

- Get millions of different types of data through Map APIs and crawling directly from websites to expand company's databases of restaurants and stores information.
- Implement simple app for our clients (Coke, Unilever, Budweiser, etc.) to get detail information of each store, including nearby stores through geographic inputs. A simple UI is also designed for them to use easily.
- Build up algorithms to de-fragment databases for colleagues to manage millions of stores clearly: (1) match the same stores from different resources based on specific conditions; (2) classify stores through giving them different tags.
- Build search indexes based on Sphinx Engine to help our data team to search for results from databases several times faster.
- Create and improve programs based on given models which analyze potential sales index of each restaurant from a comment website.

Game Experience

***Larger than Light* (Can be found in *Steam*)** *Apr 2020 - May 2021*

- USC AGP 2020. Work with 15 students in a team to make a 2.5d platformer game, which requires player to control a light bulb character to change shadows on walls and enable a 2d character to move on shadows and get keys.
- Use Unity. As an engineer, I am responsible for the 3C(Character, Controller and Camera) part, as well as enabling the 2d character's behaviours works properly on dynamic shadows.

Parkour's Edge *Nov 2019 – May 2020*

- Use SDL and C++ to make a first-person 3D game. Player can rotate directions to move on floors, jump to and run along walls through mouse and keyboard control.
- Use C++ and DX11 to implement basic engine functionalities, including linear algebra calculations, buffering, shaders of lighting, shading and animations, and collision detections.
- Enable players running on walls through frictions. Add Multiple obstacles, lasers and monitors to prevent player from reaching the destination.

Projects

Internetworking: Use C++ to implement mult-threading P2P networks, reliable packet transferring and layer communications.

3D Modeling: Use Maya to model pinball, car and hero character with textures and make simple walk animations.

Graphics: Use C++ and OpenGL to implement Heightmaps, Roller-Coasters and Ray-tracing.

Software Engineering: Use JSP, JavaScript, CSS, HTML, MySQL, Google API to implement *SeCureThatA* GPA Query Web Application.