

Jiayu Liu

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Software Engineer Experienced in C++ and C#. Solid Skills in Game Development, Tools and VR.

EDUCATION

M.S. Game Science and Design, Northeastern University, Boston Dec. 2017

B.S. in Computer and Cognitive Science, Xiamen University, China July 2014

Academic Exchange in **Computer Science**, National Chiao-Tung University, Taiwan Jun. 2012

Related Courses: C and C++ Programming, Data Structures, Algorithms, Computer Architectures, Machine Learning, Game AI, Computer Graphics, Building Game Engines, Eye-tracking Studies, Sound Design.

SKILLS

Languages: C/C++, C#, JavaScript, HTML5, Java/Android.

Solid skills in SDK and API Design and Development, Unity3D, Unreal 4, AI, VR, AR, Computer Vision.

Working Knowledge in Game Development and Virtual Reality.

Other: Git; OpenGL, Qt, Oculus, Google VR, OpenVR, Vuforia, Leap Motion, Arduino, Eye-tracking; Maya.

Volunteer at GDC, SIGGRAPH, Boston FIG conferences.

EXPERIENCE

AR / VR Developer Intern | Tipping Point Media LLC June 2017 – Aug. 2017

- Implemented gameplay features in C# and solved problems on 3D math, 3D graphics, multi-touch gestures in iOS, spatial audio, HUD, UI, image post-processing, 360 video-shooting, etc.

- Built multiple tools that facilitated the workflow, such as plugins that helped designers polish features.

- Solved problem on creating sci-fi-effect shader, which became the key to enhanced rendering performance.

C++ Programmer, Designer | Fold It - Biochemistry Educational Game Jan. 2017 – Apr. 2017

- Designed and implemented tutorials in C++ for new features in the game, which is played by 50,000 people.

- Extended the functionalities of the existing tutorial system structure and optimized C++ interfaces.

C# / Unity3D Programmer | Mad Science, NU Game Studio Oct. 2015 – Sept. 2016

- Implemented gameplay and GUI features, deployed test cases and fixed bug issues.

- Created a function that updates customized assets in runtime using JSON serialization and design patterns.

PROJECTS

Sole Developer | Prototype4AR Augmented Reality Framework Dec. 2016 – Present

- Designed the architecture and built from scratch in C++ using Open Source Computer Vision (OpenCV) libraries, targeting on PC and mobile (Android, iOS) platforms.

- Created APIs for users to build an AR app in a short time, including functionalities such as tracking objects, drawing characters on screen, specifying character movement patterns and interaction rules, etc.

AI Programmer, Co-designer | Sound of Silence Mar. 2016 – Apr. 2016

- Implemented Enemy AI with techniques such as State Machine, Path Finding, Vision Cone in Unreal 4.

- Co-designed the narratives and created mechanics, interactions and models in Level 1.