

Jiayu Liu

jiayuliu.me | github.com/joylio | jiayu.dev@gmail.com | (+1) 857-222-9384

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

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.

SKILLS

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

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

Working Knowledge in Game Development and Virtual Reality.

Other: Git; OpenGL, Qt, Oculus Rift, Google VR, OpenVR, 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 features for Oculus VR and Vuforia AR projects in C#/Unity3D, including 3D graphics, physics interactions based on 3D math, spatial audio, UI, image post-processing, etc.

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

- Solved a major problem on graphic shaders, which largely enhanced the application 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 module that updates customized assets in runtime using JSON serialization and design patterns.

PROJECTS

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

- Designed the framework architecture and built from scratch in C++ and 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 real-world objects, drawing 2D/3D characters, specifying character movement patterns and interaction rules, etc.

Co-designer, C# / Unity3D Programmer | LeafVR Nov. 2015, Aug. 2017

- Co-designed the narrative and unique mechanics for the game, and built the game with Google VR SDK.

- Improved graphics performance by implementing Object Pool and Factory Method design patterns.