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 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.

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.

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.