Jiayu Liu

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Software Engineer in Gameplay, Tools and Virtual Reality. Experienced in C# and C++.

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, Machine Learning, Level Design, Game AI, Computer Graphics, Building Game Engines, Eye-tracking Studies, Sound Design.

SKILLS

Languages: C#, C/C++, JavaScript, HTML5, Python, Java/Android.
Experienced Game Programming and Prototyping with Unity3D/UE4: Physics, Graphics, UI, Animation, VR.
Working Knowledge in Unity3D and Oculus. Projects in AR, Computer Vision and SDK Development.
Other: Git; OpenGL, Qt, Google VR, OpenVR, Vuforia, Photon, Leap Motion, Arduino, Eye-tracking; Maya.
Volunteer at GDC, SIGGRAPH and Boston FIG.

EXPERIENCE

VR Developer Intern | Tipping Point Media, LLC   June 2017 – (Est.) Sept. 2017
- Contributing interaction designs and building the experience in Oculus using C#/Unity and Oculus Touch.
- Created tools that encapsulate visual and haptic feedback as plugin. Can easily be applied to other projects.
- Solved a major problem about 3D graphics. Enhanced the 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.
- Added new functionalities, optimized the tutorial system structures and C++ interfaces.

Unity Programmer | Mad Science, NU Game Studio   Oct. 2015 – Sept. 2016
- Created a tool that updates customized assets across scenes in runtime using JSON serialization and implemented design patterns such as Singleton in C#.
- Implemented other gameplay and UI features, deployed test cases and fixed bug issues.

PROJECTS

Game Developer | SugAR Poke iOS/Android AR Game   Apr. 2017 – Present
- Created the prototype using Unity, Vuforia SDK and cloud database, currently working on the game side.

Sole Developer | Prototype4AR Augmented Reality (AR) Framework   Dec. 2016 - Present
- Designed the system architecture and built from scratch in C++ and Open Source Computer Vision libraries.
- Created clear APIs for users to build an AR app even within 30 minutes, including tracking real-world objects, drawing 2D/3D sprites, specifying movement patterns and interaction rules, etc.

Designer, Programmer | LeafVR (Cardboard VR Game with Unity3D)   Nov. 2015
- Designed "sound input" as an unconventional game mechanic, such as slow motion, that drives gameplay.
- Improved physics in interaction and camera to provide a realistic experience of moving and control.