

# Jiayu Liu

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Passionate about Computer Science, Game Engineering and Virtual Reality Development.  
Seeking full-time jobs, available for hire in June 2017.

## EDUCATION

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**M.S. Game Science and Design**, Northeastern University, Boston Expected May 2017

**B.S. in 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, Algorithms, Computer Systems, Software Engineering, Machine Learning, Artificial Intelligence, Computer Graphics, Building Game Engines.

## SKILLS

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- Programming Languages: C++, C, C#, HTML5, JavaScript.
- Development Skills: Software Engineering, Game Development with Unity3D and Unreal 4, Virtual Reality Development, Graphics Programming with OpenGL and GLM, Front-end Development.

## PROJECTS

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### **Independent Developer | Prototype4AR Augmented Reality (AR) Framework**

- Designed the architecture and functionalities of the framework, and built from scratch in C++ with Open Source Computer Vision(OpenCV) libraries.
- Encapsulated low-level functions to readable and maintainable APIs that help users build desktop/mobile AR applications conveniently, including tracking objects, drawing sprites as well as movement patterns and specifying interaction rules, etc.

### **Programmer | Text Detection Evaluation System**

- Designed and implemented an evaluation algorithm to rate the results of text detection methods.
- Built a C++ system that processes more than 1000 scene text images, visualizes the detection results, reads the data as well as the ground truth information and writes the evaluation output to the GUI.

### **Independent Developer | VisPi**

- Developed a visual programming tool in C++ for Raspberry Pi projects, which enables users to design the digital logic in the GUI simply by dragging, dropping modules and hooking up events.
- Built a script generator module that translates user settings to actual working codes for Raspberry Pi.

## EXPERIENCE

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### **Programmer | MadScience 2D Educational Game** Fall 2015, Spring 2016

- Implemented gameplay logic and UI functionalities in C# with Unity3D.
- Created a poster generating tool that updates player-defined assets across scenes in runtime.
- Designed, performed test cases and generated JSON files to identify and fix bug issues.

### **Programmer | TeaMail** Summer 2013

- Established the front-end prototype of TeaMail, a web-based team collaboration tool, including task list, tags and discussion modules, using HTML/CSS, JavaScript and Bootstrap framework.