

CHANG LIU, Software Engineer

● <https://cliu.github.io>

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EDUCATION

Carnegie Mellon University, Entertainment Technology Center (ETC) Pittsburgh, PA | May 2020
Master of Entertainment Technology

Harbin Institute of Technology (HIT) Harbin, China | Sep. 2014 – June 2018
Bachelor of Engineering, Digital Media Technology

Relevant Courses: Data Structures, Foundations of Algorithms, Java Programming Language, C/C++ Programming Language, Virtual Reality System, Video Game Design and Making, Computer Graphics and Image Processing, Web Programming

SKILLS

Programming Languages: C/C++, Java, C#, Python, JavaScript, TypeScript

Game Development: Unity3D, Unreal, HTC Vive (VR), Oculus (VR), Vuforia (AR), Kinect, Perforce

Web Development: HTML, CSS, jQuery, PHP, Bootstrap, Angular, Google App Engine (GAE)

WORK EXPERIENCE

Pocket Gems, Inc. Software Engineer, Intern San Francisco, CA | June 2019 – Aug. 2019

- Fixed front-end bugs for the web application with TypeScript and Angular 6
- Created loggings for the PM to collect player data from game server using python and GAE
- Worked with PM, QA, and UI/UX to revamp the “team quest” feature in the game [“War Dragons”](#). Developed the full-stack application using Angular 6 for frontend, python and GAE for the backend. The week after its launch, player participation in this feature increased by 40%

Carnegie Mellon University, Human-Computer Interaction Institute (HCII)

Research Assistant (Lead Programmer) Pittsburgh, PA | Feb. 2019 – July 2019

- Developed a networked cross-platform game using Unity3D and C#
- Built the user management backend system with Microsoft Azure PlayFab
- Programmed the user attraction method using Kinect SDK

ACADEMIC PROJECTS

Houdini, Programmer | Client: [Tap Systems Inc.](#) ETC, Pittsburgh | Jan. 2019 – May 2019

- Worked with the Tap, a wearable keyboard, to explore the potential use cases for this device
- Made 11 prototypes on various platforms (Mobile, AR/VR, CAVE) using Unity3D and Tap SDK
- One of the prototypes I designed and developed received more than 50K views on [YouTube](#)
- Built and maintained our project website (<https://www.etc.cmu.edu/projects/houdini/>)

Building Virtual Worlds, Game Programmer

ETC, Pittsburgh | Aug. 2018 – Nov. 2018

Overview: Every two weeks, a rotational five-person team consisting of two game programmers, two artists and one sound designer work together to design and build a virtual world. There are five rounds in total, with new themes, new constraints and new teams each round.

- Created 5 immersive interactive experiences, mostly games, in 10 weeks. One of them was selected into the “ETC Festival”
- Programmed user input system, game mechanics, and interfaces with Unity3D and C#, using platforms including HTC Vive, Oculus, Meta II, Leap Motion, and Jam-O-Drum
- Developed strong communication and teamwork skills
- Served as a producer for one team to better understand the game development process

MusicAR, Capstone Project

HIT, Harbin | Jan. 2018 – June 2018

- Designed and developed an Android app which provides a music experience with augmented reality (AR) technology
- Used Vuforia AR SDK and Unity3D with C# language

VOLUNTEER SERVICE

HIT-COLORS, Co-Founder

HIT, Harbin | May 2015

- Founded the first LGBT+ organization at HIT