

Yikai Han

Seeking a software engineer internship for Summer 2019

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<https://about.commouse.me>

EDUCATION

Carnegie Mellon University (CMU)

Master of Entertainment Technology

Courses: Building Virtual Worlds, Parallel Computer Architecture and Programming

Pittsburgh, PA

Aug 2018 – May 2020

Shanghai Jiao Tong University (SJTU)

Bachelor of Engineering in Software Engineering

Awarded National Scholarship (top 2%)

Courses: Computer System Engineering, Operating Systems, Computer Graphics, Game Design and Development

Shanghai, China

Sep 2014 – June 2018

SKILLS

Programming: C#, C++, Java, C, PHP, JavaScript, Ruby, Python, Lua, OpenGL, ActionScript

Tools: Unity, Unreal Engine, RPG Maker, MySQL, Redis, Git, SVN, Perforce, MATLAB

Fields: Game Development, Real-time Rendering, Web Development

EXPERIENCE

Digital ART Laboratory, Shanghai Jiao Tong University

Research Intern

Shanghai, China

Nov 2016 - June 2017, Nov 2017 - June 2018

- **Virtual Studio:** A highly decoupled augmented reality TV system based on Unity platform supporting interactive editing through sources from Kinects depth camera, recognized poses and voice commands. Participated in framework and shaders concerning calibration, noise elimination and composition. Published in *China Virtual Reality Conference 2017*.
- **Procedural City Generation:** A framework of procedural city modeling for self-driving car simulation environment in Unity. Implemented road network generation using optimized L-System based method. Introduced quadtree for better performance.

NetEase Games

Game Client R&D Engineer Intern

Hangzhou, China

July 2017 - Oct 2017

- Worked as client engineer on *Eclipse Isle*, an action battle royale mobile game on Unity, at the prototype stage.
- Developed core features of vehicle and riding systems that supports movement of up to 4 players in an open world.
- Improved vehicle movement synchronization supporting seamless switch of drivers for unstable network connections.
- Introduced computed property feature in a Lua library for data binding of UI to reduce complexity of UI system.

ACADEMIC PROJECTS

Building Virtual Worlds

Fall 2018

- Worked as programmer and game designer in different interdisciplinary teams to make 5 projects in 2-week cycles.
- Utilized HTC Vive, Oculus Rift, Meta 2 and Kinect on Unity platform to create VR/AR worlds.
- Improved collaboration, communication, prototyping and agile development skills of game projects.

JOS Operating System

Spring 2017

- Implemented boot loader, virtual memory mapping, preemptive multitasking, file system, network adapter driver on a simple exokernel operating system framework.

MeshMorph

Fall 2016

- Created a demo based on modern OpenGL supporting morphing between arbitrary star-shape meshes, compositing particle dispersal and flame simulation through billboard and geometry shaders by frame buffer.

MISCELLANEOUS PROJECTS

Burnout: VR eye-tracking game within 48 hrs in Global VR Hackathon. Won 3rd place at China station.

TigerCompiler: Full featured tiger compiler in C outputting x86 assembly with register allocation optimization.

Tongqu: Official activity platform for SJTU. Led the team since 2016. Refactored homepage and movie ticketing.