

Jiajun Tan

Programmer | Game Designer

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OBJECTIVE

Software engineer with computer graphics experiences seeking a position in XR industry for 2020 summer.

EDUCATION

Carnegie Mellon University, Entertainment Technology Center (ETC)

Pittsburgh, PA

Master of Entertainment Technology

May 2020

Beihang University, Computer Science and Engineering

Beijing, China

Bachelor of Science in Computer Science

July 2018

RELEVANT COURSES

Computer Graphics

Carnegie Mellon University, Pittsburgh, PA

Fall 2019

Game Design

Carnegie Mellon University, Pittsburgh, PA

Spring 2019

SKILLS

Programming: C++, C#, OpenGL, C, Java, Python, GLSL

Tools: Unity, Unreal, Visual Studio, Perforce, GitHub

Platforms: Oculus Quest, Oculus Rift, HTC Vive, Meta 2, Magic Leap, Kinect 2, Android(unity), iOS(unity)

RESEARCH EXPERIENCE

State Key Laboratory of Virtual Reality

Beihang University, Beijing, China

Virtual Surgery

Nov. 2016 – May 2018

- Implemented a soft body deformation method based on Position Based Dynamics with Shape Matching Constraint.
- Implemented a signed field particle generating method to represent the physics information of the soft body.
- Implemented a coupling mapping between geometric model and physical model.
- Implemented a soft body cutting simulation method based on Unit Duplicating concept using Delaunay Triangulation.

Visual Computing Laboratory

University of California Berkeley, Berkeley, CA

Vision Correcting Display

June 2017 – Sept. 2017

- Implemented an Edge-Augmenting Method focusing on the contour of an image to solve the information loss problem.
 - Overwrote the original code based on pruning concept and repeat-pattern reduction to improve the efficiency by 99%.
 - Implemented an anti-aliasing method using Fourier Transform to reduce the color fringing artifact from pixel arrangement.
 - Implemented a camera-eye calibration system based on Elliptical Integral to provide the distance information.
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WORK EXPERIENCE

Stitchbridge

Pittsburgh, PA

Software Engineer Intern

June 2019 – Aug. 2019

- Built a 360 VR live action Laboratory Tutorial on Oculus Quest for Nano Fabrication Lab.
 - Implemented authentication function using Google Firebase for Journey with Howard Chandler iOS app.
 - Migrated Journey through the Camps VR project from Unity to Unreal with C++ and Blueprint.
 - Designed a 3 images stitching method to make the iOS app's UI compatible with both iPhone 6-8 and iPhone x.
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ACADEMIC PROJECTS

Building Virtual World

ETC, Carnegie Mellon University, Pittsburgh, PA

Programmer

Fall 2018

- Participated in design of 5 virtual worlds, each completed in 2 to 3 weeks with different 5-person group.
- Developed with HTC Vive, Oculus, Kinect, and Meta 2.
- Improved communication, collaboration and iteration skills by cooperating with people from different background.
- Improved Unity 3D skills and C# skills for programming.
- Learned interest curve, indirect control and playtesting for game design.

Houdini

ETC, Carnegie Mellon University, Pittsburgh, PA

Programmer

Spring 2019

- Discovery project to explore the innovative use scenarios of Tap.
 - Developed with Android mobile device and daydream VR.
 - Strong iteration and rapid prototyping process dealing with an edging technology.
 - Complete 11 prototypes and 2 audio based experiences.
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HOBBIES

Bridge

- Won Asian U20 Bridge Champion in 2016
- Represented China to attend World U20 Bridge Championship in 2016