

Jiechang Guo

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EDUCATION

08/2022 – present	University of Houston	M.S.	Computer Science
09/2015 – 04/2018	Hangzhou Dianzi University	M.S.	Digital Media Technology
09/2011 – 06/2015	Jiaxing University	B.S.	Computer Science

WORK EXPERIENCE

04/2018 – 07/2021 **ArcSoft Corporation Limited (Hangzhou, China)**
- Computer Graphics Engineer of Advanced Image Solution Group

PROJECT EXPERIENCES

- 01/2021 – 03/2021 **Real-time 3D Interaction with Depth Maps** | Project Owner
- Developed mobile application for processing raw depth map and generating several AR depth features including 3D cursor, real-time depth mesh generation, hit test, occlusion
 - Unity3D real-time/offline demo integrating with AR SDK
- 07/2019 – 07/2021 **Motion Retargeting** | Project Owner
- Designed animation optimization algorithm for the given character, solving mesh penetration issue, applying secondary animation on hair
 - On-site support for Samsung in South Korea
 - C++ SDK, OpenGL for testbed, real-time Unity3D demo
 - Integrated into Samsung Galaxy S and Z Flip series' camera app
- 03/2019 – 07/2019 **Auto Joint Binding and Animation** | Project Owner
- Designed algorithm for embedding template humanoid skeleton in 3D scanned model and calculating mesh skinning, retargeting animation to the rigged model
 - C++ for the SDK, OpenGL for testbed
 - Integrated into Samsung Note 10
- 07/2018 – 07/2021 **Real-Time Body Tracking** | Core developer
- Designed algorithm for calculating animation from raw body 3d points, including points position filter
 - C++ SDK, OpenGL for testbed, real-time Unity3D demo
 - Integrated into Samsung Galaxy S and Z Flip series' camera app

- 04/2018 – 07/2021 **Skeleton Animation Related Projects**
- Developed skeleton animation driven algorithm SDK
 - Developed animation export tool to extract model information from Fbx model
 - Developed animation module of the internal graphic engine, including blend tree, animator state machine features
- 04/2018 – 07/2021 **3D Related Project Toolkits Development**
- Developed an Fbx previewer for the UX team to preview the character animation and face blendshape.
 - Fbx SDK, OpenGL, C++, ImGui.
 - Developed Unity3D tool for editing the effect of secondary animation; for annotating 3D training data.
- 10/2016 – 02/2018 **Research on Interactive Technology of 3D Models**
- Designed and developed 3D interaction for the 3D model in virtual space via HTC Vive Controllers, Tracker, and 2D multi-touch-based large display
 - Performed user study, published paper, and given a presentation at the University of Bournemouth in the UK

PUBLICATIONS

J. Guo. Research on Interactive Technology of 3D Models under Multiple VR Devices [D]. Hangzhou Dianzi University, 2018

J. Guo, Y. Wang, P. Du, and L. Yu. “A Novel Multi-touch Approach for 3D Object Free Manipulation”. Next Generation Computer Animation Techniques: AniNex Workshop 2017, Bournemouth, UK

AWARDS

The 2014 Year China National Scholarship

The 2015 Year Outstanding Graduate in Zhejiang Province

4th National College Student E-Commerce Challenge 3rd Prize

Zhejiang Province 10th “Challenge Cup” Competition 3rd Prize

The 2019 Year Best Employee Finalist Award from ArcSoft

SKILLS

Languages

C/C++; C#; Python

Graphics Engines

OpenGL; Unity3D; OpenSceneGraph

SDKs

GLM; Eigen; Fbx Sdk; ImGui; SMPL; PQlab Sdk; VRTK

Development Tools

Git; SVN; Cmake

Professional Area

Computer Graphics: Animation, Rendering, VR, AR; Image Processing; Machine Learning; Visualization