

Yiheng Zhu

SOFTWARE ENGINEER · GRAPHICS & INTERACTIVE MEDIA

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Experience

DeepMotion, Inc.

Redwood City, California

RESEARCH AND DEVELOPMENT ENGINEER

Jul. 2017 - Present

- Researched and implemented a generalized way to create different motion styles from motion captured data for virtual characters, based on optimization methods.
- Involved in developing a multiprocessing framework using Message Passing Interface.
- Migrated the multiprocessing framework from local to cloud service, involved in a web-based pipeline using web-assembly.

Robotics Institute, Carnegie Mellon University (Prof. Stelian Coros)

Pittsburgh, Pennsylvania

RESEARCH ASSISTANT

May. 2016 - May. 2017

- Researched a motion planning and control method for physics based character animation.
- Developed an innovative model using quadratic programming and planning method with OpenGL and ODE.
- Implemented a simplified model using bullet physics engine in Unity, and integrated with HTC Vive and Leap Motion. Presented in Google Tango workshop in Oct. 2016.

Brookhaven National Laboratory (Dr. Elizabeth Worcester)

Upton, New York

GUEST RESEARCHER

Jan. 2014 - Mar. 2014

- Estimated the performance of ORKA, a proposing experiment to precisely measure the branching ratio of Rare Kaon Decay, using a customized large scale parallel simulation framework based on Geant4.

Education

Carnegie Mellon University

Pittsburgh, Pennsylvania

M.E.T. IN ENTERTAINMENT TECHNOLOGY

Aug. 2015 - Exp. May. 2017

- Relevant Course: Computer Graphics, Machine Learning, Computer Systems, Cloud Computing, Building Virtual Worlds.

Tsinghua University

Beijing, China

B.ENG. IN ENGINEERING PHYSICS & B.A. (SECOND DEGREE) IN DIGITAL ENTERTAINMENT

Aug. 2010 - Jul. 2014

- Specialized in High Energy Physics.

Projects

ArithMagic (Intermediate Unit 1)

Pittsburgh, Pennsylvania

PROGRAMMER

Jan. 2017 - May. 2017

- Developed an educational game for eleven K-5 kids with special needs in East Franklin School District.
- Published on App Store in May. 2017, invited to be presented in Digital Media and Learning conference at UC Irvine in Oct. 2017.

M-Lab (Merck KGaA)

Pittsburgh, Pennsylvania

PRODUCER & PROGRAMMER

Aug. 2016 - Dec. 2016

- Developed an learning experience in Virtual Reality for new Biopharma equipment users using Google Cardboard.

Ikelos (Sony Playstation)

Pittsburgh, Pennsylvania

PROGRAMMER & 3D ARTIST

Jan. 2016 - May. 2016

- Explored unique gameplay for Virtual Reality by rapidly prototyped 13 prototypes with Google Cardboard and Dualshock Controller.
- Developed a flexible framework for instant feedback and created customized shaders according to visual development artists' concept art with Unity ShaderLab and the Cg.

Extracurricular Activity

VOCALOID China

Guangzhou, China

FREELANCE PROMO VIDEO MAKER

Sep. 2014 - Present

- Worked on several non-commercial songs as music video director with musicians, lyrics writers and concept artists.