

## Character Setup TD

### HIGHLIGHTS

- ❖ 5 years feature film production experience
- ❖ Recently graduated with PhD in computer science
- ❖ Rigged directly on 7 feature films, developed tools for 12 feature films
- ❖ Strong ability for quickly learning new programs and languages
- ❖ Rapidly assess problems and construct creative solutions

### EDUCATION

**Doctor of Philosophy - Computer Science** University of North Carolina – Chapel Hill  
Emphasis in Virtual and Augmented Reality Displays Chapel Hill, NC, **2019**  
*Dissertation:* Deformable Beamsplitters: Enhancing Perception with Wide Field of View, Varifocal Augmented Reality Displays

**Master of Science - Computer Science** University of North Carolina – Chapel Hill  
Emphasis in Virtual and Augmented Reality Displays Chapel Hill, NC, **2018**

**Bachelor of Fine Arts - Animation** Brigham Young University  
*Student Academy Awards:* Pajama Gladiator and Kites Provo, UT, **2009**  
*Student Emmys:* Pajama Gladiator, Kites, Lion and the Mouse, and X-ing

### SOFTWARE AND RELEVANT EXPERIENCE

- ❖ Maya
- ❖ Linear Algebra
- ❖ Linux
- ❖ CAD and 3d Printing
- ❖ MEL
- ❖ OpenGL
- ❖ BASH
- ❖ Micro-controllers
- ❖ Python
- ❖ Matlab and C
- ❖ Deep Learning
- ❖ PyTorch and Docker

### FEATURE FILM PRODUCTION EXPERIENCE

Olive Kitteridge	Nov 2014
22 Jump Street	June 2014
Maleficent	May 2014
Wreck-It Ralph	Nov 2012
Arthur Christmas	Nov 2011
Green Hornet	Jan 2011
Cats & Dogs: The Revenge of Kitty Galore	Jul 2010
Cloudy with a Chance of Meatballs	Sept 2009

### AWARDS AND HONORS

<b>2018 ISMAR Conference Best Paper Award</b>	IEEE Computer Society
<b>2018 DOID Student Optical Design Challenge First Prize</b>	SPIE Photonics Europe
<b>2017 SIGGRAPH Emerging Technologies DCEXPO Special Prize</b>	Digital Content Association of Japan
<b>2017 Timothy L. Quigg Student Inventor of the Year Award</b>	UNC-Chapel Hill Computer Science
<b>2017 IEEE-VR Conference Best Paper Award</b>	IEEE Computer Society
<b>2017 GPU Technology Conference Best Poster Finalist (Top 5)</b>	NVIDIA

## PATENTS

**US Patent 9,983,412**

UNC-Chapel Hill

Wide field of view augmented reality see through head mountable display with distance accommodation

## PROFESSIONAL EXPERIENCE AND CONTRIBUTIONS

### Disney Research

Glendale, CA

2018-2020

*Post-Doctoral Research Associate*

- ❖ Developed new technology for deployment in theme parks
- ❖ Responsible for concept, design, hardware, algorithms, and software

### NVIDIA

Santa Clara, CA

2015, 2016, and 2017

*Research Intern*

- ❖ Employed deep learning for better accuracy in eye-tracking for near-eye displays
- ❖ Researched new varifocal augmented reality display technology
- ❖ Explored human visual perception with respect to near-eye displays

### Shade VFX

Santa Monica, CA

2013 – 2014

*Lead Character TD*

- ❖ Created a crowd generation system for live-action stadium fill
- ❖ Responsible for all character setup on HBO mini-series
- ❖ Processed LIDAR data from scans for CG stadium recreation

### Digital Domain

Venice, CA

2012 – 2013

*Character TD*

- ❖ Responsible for rigging Maleficent character for Maleficent film
- ❖ Set up character rigging pipeline for three pixie characters on Maleficent

### Disney Feature Animation

Burbank, CA

2011 – 2012

*Character TD*

- ❖ Simulated cloth and hair on Wreck-It Ralph
- ❖ Technical Animation on Wreck-It Ralph
- ❖ Developed and programmed tools for cleaning deformations in technical animation

### Sony Imageworks

Culver City, CA

2009 – 2011

*Intermediate Character TD*

- ❖ Developed method to speed up every stand-in rig at facility by 10-15%
- ❖ Formulated generic spine to replace custom spine plug-in for other facilities
- ❖ Implemented system for building proprietary Sony rigs with custom in-house transform constraint nodes in native Maya format for export to other facilities
- ❖ Interfaced with programmer in developing and debugging PSD mirroring for proprietary deformer

Demo reel and website located at [Qenops.com/animation](http://Qenops.com/animation)