

# MADELEINE YIP

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## EDUCATION

### Stanford University

Master of Science, Computer Science, Graphics / Real World Computing  
Bachelor of Science, Computer Science, Graphics  
Bachelor of Arts, Art Practice

Graduating in Sept 2021

Grad GPA: 3.96

Undergrad GPA: 3.81

## PROFESSIONAL EXPERIENCE

### Stanford University

Stanford, CA

#### *Computer Science Course Assistant*

September 2020 – Present

- > Co-taught Introduction to Computer Graphics, Interactive Computer Graphics, Computer Organization & Systems
- > Led weekly 1:1 office hours and review sessions, wrote and graded exam questions

### Lucasfilm

San Francisco, CA

#### *Rendering Engineer Intern, Advanced Development Group*

June 2020 – September 2020

- > Independently designed and implemented the automation of texture baking and shader translation for the MaterialX open-source project, streamlining the content pipeline between technical artists and the final rendering platform
- > Automation functionality used on graphics projects across Lucasfilm, ILM, Adobe, Pixar and Autodesk
- > Presented texture baking project to over 140 attendees at SIGGRAPH 2020, the premier conference in computer graphics and VR/AR techniques

#### *Rendering Engineer Intern, Advanced Development Group*

June 2019 – September 2019

- > Designed initial iteration of MaterialX shader translation, enabling shader transfer between 3D graphics platforms
- > Created first iteration of texture baking with C++ to allow technical artists to save procedurally generated shaders

### Stanford University

Stanford, CA

#### *Virtual Reality Developer, Virtual Human Interaction Lab*

September 2018 – June 2019

- > Developed 1000 Cut Journey VR experience 2.0 that explores racial empathy (originally at 2018 Tribeca Film Festival)
- > Scripted game functionality and events in Unreal and C#, refining avatar-world interaction and gameplay experience

### Microsoft

Redmond, WA

#### *Explore Intern (Project Management/Software Engineering)*

June 2018 – August 2018

- > Redesigned user experience of Microsoft's internal website to better track worldwide transactions real-time
- > Used Javascript and HTML to visualize transactions and to monitor abnormal transaction traffic

## LEADERSHIP EXPERIENCE

### Stanford University Women in Computer Science

Stanford, CA

#### *External Events Chair & Board Member*

September 2017 – Present

- > Spearheaded first annual Sponsorship Dinner, a networking night attended by 100+ professionals and students
- > Proposed and conducted outreach for Spring Distinguished Speakers series (included Co-Founder of Venmo, CEO of Nuna, CEO of PlanGrid, and Director of Engineering at Airbnb) attended by 90+ students
- > Coordinated 20+ educational events with sponsors (included D.E. Shaw, Google, Andreesen Horowitz, Airbnb, Stripe)

### Stanford University Clayman Institute for Gender Research

Stanford, CA

- > Led STEM-oriented leadership workshops and facilitated discussions for girls at East Palo Alto Phoenix Academy

## INDEPENDENT RESEARCH PROJECTS

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Single View Object Reconstruction with Differentiable Rendering

March 2021

- > Implemented Variational Shape Learning (a convolutional architecture with skip-connections) from scratch in Pytorch

Inferring Shading Parameters from Generated Images

December 2019

- > Used deep learning (VGG-16) to reverse engineer an image generated with look development platform, MaterialX

## SKILLS & INTERESTS

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Skills: C++, Python, Machine Learning, Tensorflow, Pytorch, C, OpenGL, Javascript, Unreal, Cantonese, Mandarin

Interests: Distance running, women in STEM, oil painting, baking, cooking, drawing, animation

