

# ANDREW LIU

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## EXPERIENCE

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### AI Research Software Engineer (L4)

Aug 2018 – Present

*Machine Perception, Google Research*

*New York City, NY*

- Formulate research ideas and themes for the application of inverse graphic models to Google Street View
- Conduct computer vision research with two publications to top-tier conferences and multiple others under review
- Maintain close collaborations with researcher and faculty at various institutions
- Presented research findings at multiple external venues
- Built automated tools for organizing the world-scale Street View into useful training data

### Student Researcher

Mar 2017 – Aug 2018

*Berkeley AI Research*

*Berkeley, CA*

- Conducted experiments for various research projects involving unsupervised and self-supervised methods
- Co-authored a high-impact publication at a top-tier conference

### Software Engineering Intern

May 2017 – Aug 2017

*YouTube, Google*

*Cambridge, MA*

- Developed a load profiling tool for measuring latency of YouTube servers under various distributions of requests
- Fit statistical models to load testing data to predict performance behaviors of different server configurations

## EDUCATION

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### University of California, Berkeley

Berkeley, CA

*B.S Electrical Engineering and Computer Science w/ Higher Honors*

*Aug 2014 – May 2017*

Dean's List • ML@B alumni • IEEE-Eta Kappa Nu • Tau Beta Pi

*3.90 / 4.00*

### University of California, Berkeley

Berkeley, CA

*M.S Computer Science*

*Aug 2017 – Aug 2018*

Thesis: *Image Splice Detection via Learned Self-Consistency*

*4.00 / 4.00*

## PROJECTS

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### Rendering onto deformable surface using visible ink | *Python, Matlab, Image Processing*

Dec 2016

- Used a dense SIFT flow algorithm to render arbitrary images onto a rapidly deforming paper
- Results, project page, and exploratory paper available online

### Generalized Appearance Features for Object Tracking | *TensorFlow*

May 2017

- Used deep learning to identify complex trajectories using Kalman filtering and appearance-invariant features

### S&P 500 Intra-day Options Dataset | *Python, HTTP*

Mar 2021 –

- Live collection of bid-ask quotes on all S&P 500 stocks' option chains every five minutes
- Database API to seamlessly load and organize recurrent training data across multiple option chains
- Intent to distribute data to assist in open-source research and modeling of quantitative algos

## TECHNICAL SKILLS

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**Proficient Languages:** Python, C++,  $\LaTeX$ , HTML

**Libraries:** TensorFlow, PyTorch, NumPy, Matplotlib

**Skill set:** Statistical Learning, Computer Vision, 3D Systems, Optimization, Generative Modeling