Andrew Liu

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Experience

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 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 relevant training setups

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

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*

Carnegie Mellon University Pittsburgh, PA
Incoming PhD Student *Aug 2021*
Robotics Institute

Projects

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 Kalaman 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

Languages: Python, C++, LaTeX, HTML
Libraries: TensorFlow, PyTorch, NumPy, Matplotlib
Skill set: Statistical Learning, Computer Vision, 3D Systems, Optimization, Generative Modeling