





# Owen Jow

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## Interests

### Computer Vision

e.g. 3D reconstruction, human pose estimation

### Computer Graphics

e.g. sampling and reconstruction for photorealistic rendering

### AI/ML

e.g. deep reinforcement learning algorithms

## Education

**University of California, San Diego**  
MS COMPUTER SCIENCE (4.0), 2020

Relevant courses:

- Computer Animation
- Computer Vision I, II, III
- Deep Unsupervised Learning
- Advances in 3D Reconstruction
- Machine Learning for the Arts
- Machine Learning on Geometrical Data
- Sampling/Reconstruction of Visual Appearance

**University of California, Berkeley**  
BA COMPUTER SCIENCE (3.8), 2018

Relevant courses:

- Algorithms
- Optimization
- Linear Algebra
- Computer Vision
- Machine Learning
- Computer Graphics
- Artificial Intelligence
- Deep Neural Networks
- Computational Photography
- Graduate Computer Graphics
- Deep Reinforcement Learning

## Skills

Python	C/C++	ROS
PyTorch	Java	OptiX
TensorFlow	JavaScript	OpenGL

## Experience

- Research Assistant @ UCSD Visual Computing Lab** 01/2019  
- Present
  - Working with Prof. Ravi Ramamoorthi on using deep learning to efficiently relight animated humanoid characters and approximate global illumination for games.
- Research Intern @ Adobe (Emerging Graphics Group)** 06/2019  
- 09/2019
  - Developed feature-rich CPU/GPU path tracers which were integrated into Adobe Dimension as rendering backends.
- Research Intern @ Adobe (Emerging Graphics Group)** 05/2018  
- 09/2018
  - Explored methods for monocular, in-the-wild 3D human pose estimation. Submitted patent application for an approach based on parameterizing using joint rotations.
- Research Assistant @ UC Berkeley Robot Learning Lab** 06/2016  
- 05/2018
  - Under supervision of Prof. Pieter Abbeel, developed a system for training robots to autonomously perform complex manipulation tasks using deep learning and data from VR teleoperation. Published paper at ICRA 2018.

## Publications

Deep Imitation Learning for Complex Manipulation Tasks from Virtual Reality Teleoperation (ICRA 2018).  
*T. Zhang, Z. McCarthy, O. Jow, D. Lee, X. Chen, K. Goldberg, P. Abbeel*

## Teaching

### UC Berkeley

CS 61A: Structure and Interpretation of Computer Programs  
*Tutor (Fall 2015), TA (Spring 2016, Fall 2016, Spring 2017)*

CS 194-26: Image Manipulation and Computational Photography  
*Reader (Fall 2017)*

CS 170: Efficient Algorithms and Intractable Problems  
*TA (Spring 2018)*

### UC San Diego

CSE 152/252A: Undergraduate/Graduate Computer Vision  
*TA (Fall 2018, Spring 2019, Fall 2019)*

CSE 21: Mathematics for Algorithms and Systems Analysis  
*TA (Winter 2019)*

## Selected Projects

### KPCN Denoising for Monte Carlo Path Tracing

Implemented 2018 KPAL paper by Vogels et al., which as of Fall 2018 is the state of the art method for denoising Monte Carlo renderings.

### Occlusion-Aware Multi-Object Viewpoint Prediction

Given a single RGBD view of a multi-object scene and a desired viewpoint, predict the desired RGBD view. Reconstruct 3D scene geometry by combining depth maps from multiple views.