





# 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 Vision I  
Computer Vision II  
Advances on 3D Reconstruction  
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	TensorFlow	ROS
C/C++	PyTorch	Photoshop
Java	OpenGL	Animate CC
JavaScript	OptiX	Autodesk Maya

## Experience

### Research Assistant @ UCSD Visual Computing Lab

01/2019  
- Present

- Working with Prof. Ravi Ramamoorthi to push the state of the art for reconstruction from few-sample path tracing.

### Research Intern @ Adobe (Emerging Graphics Group)

06/2018  
- 05/2018

- Explored methods for monocular, in-the-wild 3D human pose estimation with Duygu Ceylan. Submitted patent application for an approach based on parameterizing using joint rotations instead of positions.

### 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: Introduction to Computer Vision  
TA (Fall 2018)

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. By combining depth maps from multiple views, can reconstruct 3D scene geometry.

### Lens Simulator

Path tracer with lens refraction and contrast-based autofocus.