Owen **Jow**

ohjay

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Interests

Computer Vision

e.g. 3D reconstrution, 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, II, III
Deep Unsupervised Learning
Advances in 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 - 09/2018*

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

Lens Simulator

Path tracer with lens refraction and contrast-based autofocus.