Owen **Jow**

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Education

University of California, Berkeley — *Berkeley, CA*

Bachelor's in Computer Science — *August 2014 - PRESENT*

- Relevant courses: Computer Graphics, Algorithms, Machine Learning, Image Manipulation & Computational Photography, Artificial Intelligence, Ruby on Rails, Database Systems, 3D Modeling & Animation, Data Structures, Linear Algebra
- GPA: 3.84 (some form of A in all of the above courses)

Experience

Robot Learning Lab (Prof. Pieter Abbeel) — *Berkeley, CA*

Undergraduate Researcher — *June 2016 - PRESENT*

- Developed a system for autonomous, task-based robot motion by means of a neural network trained on VR demonstrations.
- Worked on the interface for robot teleoperation using virtual reality controls, while also tuning the model architecture for best results.

UC Berkeley EECS Department — *Berkeley, CA*

Undergraduate Student Instructor — *August 2015 - PRESENT*

- Served as a teaching assistant for CS 61A, the introductory programming paradigms class at Berkeley (~1600 students in Fall 2016).
- Worked with professors and other TAs to create course content such as exams and section worksheets.
- Led weekly discussions, labs, and office hours.

ASUC Office of the CTO — *Berkeley, CA*

Backend Engineer — *October 2015 - December 2015*

- Helped restructure the database, performed load testing, and contributed to general backend bug fixes as part of the Berkeleytime team (www.berkeleytime.com).

Highlighted Projects

Automatic Image Stitching | Python — *November 2016*

- Automatically and seamlessly stitches images together using Harris corner detection, feature descriptor matching with SSD, RANSAC, and homography calculation for warping.
- Also allows for the rectification of image features and the creation of 360° cylindrical panoramas.

Single View Modeling | Python — *December 2016*

- PyOpenGL realization of the "tour into the picture" algorithm, complete with a GUI for selecting points and walking through scenes.
- In its current incarnation, the program is able to take in a one-point perspective image and reconstruct a 3D model of its content.

Lens Simulator | C++ — *March 2016 - April 2016*

- Path tracing, where rays are refracted according to an input lens model. Supports contrast-based autofocus.
- At its core: a physically-based renderer built upon a large number of ray intersection tests, acceleration using a BVH, Russian roulette methods for secondary ray termination, and reflection/refraction computation for different materials.

The Rap App | HTML, CSS, JavaScript — *October 2015*

- Provides an interactive, online platform for computer-aided freestyle.
- Listens to what a person says, and – at breaks in the flow – displays a rhyme for the last word spoken.

Skills

Programming Languages and Frameworks

Python, **Java**, **C++**, OpenGL, JavaScript, HTML, CSS, C, SQL, ROS, C#, Unity, Android, Ruby, Ruby on Rails, Django, Scheme, Scala, MIPS assembly, Bash

Software

Adobe Photoshop, Adobe Animate CC, Autodesk Maya