

EDUCATION	University of California, Berkeley, May 2021 M.S., Electrical Engineering and Computer Science [Advisor: Michael Lustig] B.S., Electrical Engineering and Computer Science (May 2020)		
RELEVANT COURSES	Computer Vision*, Statistical Learning Theory, Statistical Signal Processing, Low Dimensional Models for High Dimensional Data, Machine Learning, Digital Image Processing, Digital Signal Processing, Probability Theory, Algorithms, Information Theory, Embedded Systems, Digital Design (FPGA)		
	*in progress		
LANGUAGES	Python, Matlab, C, Verilog, RISC-V, Java, Swift (iOS), SQL		
WORK EXPERIENCE	Computational Imaging Lab [Prof. Lustig] , Graduate Researcher May 2018 - Present - Engineered a deep decoder generative network for image denoising and subsampled magnetic resonance (MR) image reconstruction. [Abstract] [Code] - Formulated a volumetric MR image stitching solution to minimize overlap artifacts UC Berkeley EECS Department , Undergraduate Student Instructor Jan 2018 - Dec 2019 - Devices and Systems & Computer Architecture: Led discussions and labs of 50 students on the fundamentals of circuit design, control and signals theory, and computer architecture - Optimization [Prof. Bayen] & Signals [Prof. Ayazifar]: Created new, application-based labs and homework related to stock price tracking , communication systems , and image compression Apple Inc. , Product Security Intern May 2017 - Aug 2017 - Created a Command Line Interface to perform complex queries on a distributed graph database (under NDA) - Designed and implemented a server automation project (under NDA)		
PROJECTS	Computational Photography Projects Colorizing the Prokudin-Gorskii Photo Collection Image Straightening, Sharpening, Hybrids, and Blending Face Morphing MNIST Fashion Classification and Facade Segmentation (CNNs) Image Warping and (Auto)-Mosaicing Light Field Camera Processing, Seam Carving, HDR Imaging Learned Low Dimensional Image Representations for Facial Recognition [Paper] Used several different low dimensional image representations (Decimation, Haar Wavelet, PCA, Convolutional Autoencoder) to improve the performance of a dictionary-based classification algorithm for facial recognition RISC-V CPU and Audio Synthesizer on FPGA [Report] Made a 60 MHz, 3-stage pipelined, RISC-V CPU with user I/O and an NCO audio synthesizer. Localization and Unpredictable Surveillance with Drones [Demo Video] Using IR Reflectors and a system of Motion Capture cameras, localized and controlled a drone to randomly visit waypoints while avoiding an adversary turtlebot Image Object Removal [Presentation] Combined Mask R-CNN and Generative Image Inpainting (GAN) architectures in order to inpaint objects in a scene Radio Modem and Image Compression Algorithm [Presentation] Created our own variant of JPEG image compression and an AFSK modem to transmit images across a room. Placed third in the competition. Self-Inverting Pendulum [Demo Video] Created a self-inverting pendulum by combining a LQR Controller with a Leunberger Observer for state estimation and Bang-Bang control for swing-up.		