Philip Jacobson

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First year Electrical Engineering and Computer Science PhD student at UC Berkeley. Currently interested in photonic-enabled artificial intelligence and machine learning.

EDUCATION

University of California, Berkeley Aug 2019-Present
PhD, Electrical Engineering and Computer Science GPA: 3.85/4.00

Cornell University Aug 2015-May 2019
Bachelor of Arts, Physics GPA: 3.99/4.00 *Magna Cum Laude*
Honors: Phi Beta Kappa, Howard Milstein Scholar (Spring '19), Howard Milstein Book Award (Spring '19), Dean's List (Fall '15 – Fall '18)

EXPERIENCE

UC Berkeley *Graduate Student Researcher* Aug 2019-Present
Advisor: Ming Wu
Simulating novel brain-inspired Recurrent Neural Network (RNN) architectures for chaotic time-series prediction. Implementing design on combination of photonic hardware and FPGAs. Optimizing network parameters by running Python simulations on a large computing cluster.

Cornell Atomic Physics *Research Assistant* Jan 2018-May 2019
Advisor: Carl Franck
Designed and ran an experiment at Cornell's High Energy Synchrotron Source. Wrote Python software to analyze several Terabytes of x-ray scattering data. Ran software on computing cluster to speed-up data processing. Presented results at American Physical Society March Meeting.

Cornell Dept of Physics *Teaching Assistant* Aug 2016-May 2018
TA for Phys 1112: Intro Mechanics and Phys 2214: Waves and Optics. Helped teach recitation sections and held office hours to assist students with homework.

Cornell Cosmology *Research Assistant* Feb 2016-Dec 2017
Advisor: Mike Niemack
Designed and built a Fourier Transform Spectrometer to for characterizing silicon telescope lenses. Wrote control software in Python/Arduino, designed hardware using Zemax and Solidworks. Optimized telescope lens layouts using Zemax and Python.

SKILLS/OTHER

Active Citizen Feb 2017-May-2019
Promoted participation in community activities amongst residents in Cornell's Housing System. Hosted professors from the physics department to give informal talks encouraging participation in physics research

Languages: Python, Java, MATLAB, HTML, CSS, JavaScript

Operating Systems: Windows, MacOS, Linux/Unix

Software: Solidworks, Zemax OpticStudio, Wolfram Mathematica