

Graham Woolley

(847) 873-4242 • gwoolley@berkeley.edu • 555 Pierce St apt 443, Albany, CA 94706

EDUCATION

Berkeley, CA	University of California, Berkeley	08/2017-12/2019
<ul style="list-style-type: none">• B.A. in Physics, GPA 3.881• Coursework: Instrumentation and Experimentation Lab, Particle Physics, Python, Statistical and Thermal Physics, Quantum Field Theory, Electric Power Systems, Climate Change Mitigation,, Climate Change Economics, Environmental Engineering, Analytic Mechanics		

SKILLS

- Advanced data analytics in Python
- Basic SQL querying skills
- Data analytics with R, Excel, and Mathematica
- Design of digital and analog circuits, feedback control, and signal processing
- Construction and policy analysis of climate models in Excel
- Life cycle analysis of renewable energy systems

RESEARCH

Undergraduate Researcher	Berkeley Center for Theoretical Physics	01/2019-06/2019
<ul style="list-style-type: none">• Compared existing astrophysical data to the predictions of several candidate models for Dark Matter, placed constraints on the parameters of each model and demonstrated the inviability of each model, motivating future experiments in Dark Matter detection		

Undergraduate Researcher	UC Berkeley Department of Nuclear Engineering	01/2018-01/2019
<ul style="list-style-type: none">• Monitored ion sources and system parameters for experiments in geochronology and nuclear reaction cross section measurements at the High Flux Neutron Generator (HFNG)• Machined a sample holder that carries increased samples inside the HFNG, resulting in better statistics• Used high purity germanium detectors to collect cross section data on irradiated samples• Performed data analysis with Python, revealing a previously unknown property of the Nickel-58 nucleus		

EMPLOYMENT

Analytics Intern	New Sun Road P.B.C.	01/2020-05/2020
<ul style="list-style-type: none">• Developed Python script for acquiring microgrid performance and usage data from the New Sun Road server• Analyzed the data using Python (Numpy, Pandas, Matplotlib), specifically in projects involving anomaly detection, for example in detecting degrading batteries• Produced an algorithm that identifies grids experiencing unmetered power anomalies and lists likely causes		

Upper Division Tutor	UC Berkeley Department of Physics	09/2019-12/2019
<ul style="list-style-type: none">• Led group exam prep sessions in upper division electricity & magnetism and quantum mechanics classes• Held weekly office hours where I used homework to help students develop broader problem solving skills		

STEM Educator	Lawrence Hall of Science, Berkeley, CA	05/2019-08/2019
<ul style="list-style-type: none">• Fostered enthusiasm and scientific literacy in children through hands-on science camps• Helped students become well-versed in topics ranging from space exploration to climate change• Encouraged critical thinking and curiosity through question-based learning and self-guided experiments		

OUTREACH

Transfer Mentor	UC Berkeley Department of Physics	
05/2019-12/2019	<ul style="list-style-type: none">• Mentored new students in their transition to Berkeley academic life, offering insights into research opportunities, time management, and building rapport with professors and other students	

Golden Bear Orientation Leader	UC Berkeley New Student Services	04/2019-08/2019
<ul style="list-style-type: none">• Prepared a group of new students to start their journey at Berkeley by leading discussions on the challenges and highlights of student life and by making them aware of the resources available to them as students		

Science Mentor	Community Resources for Science	09/2017-06/2019
<ul style="list-style-type: none">• Visited local schools to teach science and to mentor students in crafting original science projects		

HONORS

Olsen Memorial Award	UC Berkeley Department of Physics	10/2018
Art Moore Honors STEM Scholarship	Orange Coast College	05/2017
Peter Hernandez Memorial Scholarship	Orange Coast College	05/2017