**Ian Hunt-Isaak**

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# Education

PhD. Candidate in Applied Physics, Harvard University SEAS

B.A. in Physics with High Honors, Oberlin College, May 2017

Stanford University Coursera Machine Learning course

https://www.coursera.org/account/accomplishments/certificate/CC7QFHVB78DN

# EXPERIENCE

**Harvard University - Hekstra Lab**  Fall 2017-Present

*Research Assistant*

* Researching equipment to set up a new lab
* Developing a method to measure nanosecond electric field pulses inside a protein crystal

**Oberlin College – Ijiri Physics Lab** Jan. 2015 - May 2017

*Researcher*

* Investigated magnetic structure of Manganese Ferrite Nanoparticles via Neutron Scattering
* Extended the NIST SANS macros enabling faster analysis
* Developed python analysis scripts for systematic fitting of hundreds of data files
* Completed an Honors thesis

**National Institute of Standards and Technology**  Summer 2016

*Summer Undergraduate Research Fellow*

* Designed and developed an X-Ray and Neutron scattering calculator for protein simulations with periodic boundary conditions
* Increased performance of scattering calculation and analysis algorithm on multi-million atom systems 5-6x using NumPy and C++
* Improved the SASSIE and SASMOL projects code developed and utilized by researchers for analysis and modeling of biological macromolecules

**Rutgers University – Relativistic Heavy Ion Group** Summer 2015

*REU student*

* Studied the Quark Gluon Plasma through Monte Carlo Simulation
* Improved a framework to run Monte Carlo Simulations - github.com/ianhi/GeneratorInterface
* Investigated the 3/2 jet ratio in lead ion collisions with C++ using the ROOT framework
* Presented results at APS Division of Nuclear Physics Annual Meeting, Sante Fe NM, Oct. 29, 2015

**Oberlin College 3D Printing** Sept. 2015 - May 2017

*Treasurer and Director + ExCo Instructor*

* Managed $4,000 budget
* Taught an ExCo (taken for credit by Oberlin College students) designed to introduce students to the technical skills of making and DIY culture. Taught Fall 2015, Spring and Fall 2016/2017

**Tutoring** Fall 2014 - May 2017

*Via Oberlin College and Independently*

* Subjects include Single and Multivariate calculus, Intro Economics, IB Math, IB Physics

# Distinctions

* Member - Sigma Xi
* Member - Phi Beta Kappa
* One of four Oberlin nominees for the Goldwater Scholarship in 2016
* John F. Oberlin Scholarship recipient