

Henry J. Nelson

[henrynel17@gmail.com](mailto:henrynel17@gmail.com)

## Education:

---

8/2013-Present      Intended Mathematics and Physics Major, Grinnell College

8/2013-5/2014      Technical Computer Services training program, Grinnell College

## Research Experience:

---

5/2016 – 8/2016      ***Student Collaborator, Electronic Detector Group***  
**Brookhaven National Laboratory, Upton, NY**  
Measured the quantum yield of novel scintillating fluids investigating their feasibility for use in large-scale particle detectors. Activities included data collection and analysis, software development for experiment monitoring, equipment calibration, and fluid preparation in a chemistry lab setting. (PIs: David Jaffe, PhD. Lindsey Bignell, PhD)

5/2015 - 8/2015      ***Research Assistant, Scientific Computing Lab***  
5/2014 – 7/2014      **Department of Computer Science and Engineering, University of Minnesota**  
Development and testing of novel machine learning algorithms for pattern recognition, estimation of large matrix properties, graph-based dimension reduction, and optimization in an academic research lab. (PI: Yousef Saad, PhD)

7/2014 – 8/2014      ***Research Assistant, Rehabilitation Engineering Research Lab***  
**Minneapolis VA Hospital, Minneapolis, MN**  
Software development for interfacing with medical equipment as well as prototype medical device development, eye-tracking systems development, virtual reality graphics programming, and Android app development. (PI: John E. Ferguson, PhD)

## Work Experience:

---

1/2015- Present      ***Teaching Assistant, in both Dept. of Computer Science and Dept. of Physics***  
**Grinnell College, Grinnell, IA**  
Instruction of introductory, intermediate, and upper level students in course content, lab preparation, experiment execution, and data analysis in classroom, tutoring, and laboratory settings. Courses worked in: Introduction to Electrostatics: 2 semesters; Classical Mechanics: 1 semester; Automata, Formal Languages and Computational Complexity: 1 semester;

8/2013 – Present      ***Technology Consultant, Information Technology Services, Grinnell College***  
General computer and network repair including both hardware and software issues with customer contact both in person and over the phone.

## Skills, Awards, and Leadership:

---

**Second Language:** Intermediate proficiency with Mandarin Chinese

**Programming:** Proficient with Python, C/C++, Java, Matlab, Lisp, Mathematica, and R.  
Familiar with OpenCV software packages

**Grinnell College Dean's list:** 4 Semesters

**President of Grinnell College Drone Club:** Drone club builds and flies remote control multirotors for aerial photography of school events and for fun.