Jackson T. Henry

Rochester Institute of Technology Undergraduate
Physics Major, Mathematics Minor

Contact Information:

Mailing Address:

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Education:

- Rochester Institute of Technology (RIT) class of 2016
- Amherst Regional High School (ARHS) class of 2012

Research Experiences:

- RIT Center for Computational Relativity and Gravitation (CCRG) fall 2013 - present
  - Worked, under Dr. Whelan, creating and modifying python scripts to calculate and visualize the detection radius of all the Laser Interferometer Gravitational Observatory (LIGO) detectors.
  - Future work will include creating a combined probability detection map for all LIGO telescopes and overlaying it on a map of the visible universe.
  - Upcoming presentation at Imagine RIT
- UMass Amherst LIGO group, summer 2012
  - Updated LIGO summary pages (web pages that display live primary and secondary data channels).
  - Began to set up summary pages on LIGO Hanford server.
  - Fixed real time plotting on summary pages.
- UMass Amherst LIGO group, 2011
  - Worked for Dr. Cadonati, under her graduate student Dr. Mohopatra, on a visual aid of the r-mode oscillations of a neutron star for use in presentations.

Employment:

- RIT CCRG, research assistant (see research experience)
- UMass LIGO group research assistant (see research experience)
- Freelance web developer/designer — Built webpages on modern standards and streamlined existing webpages to take advantage of new technologies, summer 2013

- ❖ Consultant for the Concord Consortium — Explored and reported on inaccuracies in the Next Generation Molecular Workbench physics simulation, using Python, summer 2012.

Computational Skills:

- ❖ Languages
  - Extensive experience with Python (Numpy, Scipy, Matplotlib, Mlab, Sympy)
  - Extensive experience with JavaScript (D3.js, Jquery), CSS3, HTML5
  - Mathematica
  - Basic MATLAB and numerical simulation techniques
  - LaTeX
  - Arduino
  - Some experience with the bash shell
- ❖ Operating Systems
  - Ubuntu
  - OSX
  - Windows (xp – 8)
- ❖ Programs
  - Basic VIM
  - Sublime Text 2

Independent investigations:

- ❖ Created online interactive data visualizations for various datasets (e.g. sea level since 1860, average age of the global population, government requests made to Facebook by different countries)
- ❖ Designed in-browser physics simulations (earth gravity, spring, force addition)
- ❖ Python programs for various scientific tasks (Discrete Fourier transform, Graphing Calculator, spherical Harmonic visualization, kinematics solver)

Leadership Positions:

- ❖ Founder and leader of ARHS swing dance club; 2011-2012

Professional Organization Memberships:

2012-current: LIGO Scientific Collaboration (LSC)
2012-current: Society of Physics Students (SPS)
2013-current: RIT CCRG
2013-current: STARS astronomy group
Summer 2013: UMass Amherst Physics Department

Additional Skills/Interests:

- ❖ 2012-current: Juggling club member
- ❖ 2012: Swing dance club member

- 2012: Archery club member
- 2012: fencing club member
- 2013-current: GO club member
- 2010-2012: Quidditch club member and fund organizer
- 2009-current: Sketching and photography
- Always: Cooking/Baking