

## ADAM J. STEWART

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### EDUCATION

**Bachelor of Science, Cornell University, College of Engineering**, Ithaca, NY May 2014

Major: Science of Earth Systems • Concentration: Computational Geophysics

Graduated *magna cum laude* with honors • Cumulative GPA: 3.94 • Major GPA: 4.04

Honors Thesis: Monitoring Glacial Velocity Variation in the Russian High Arctic Using Remote Sensing

### PROFESSIONAL EXPERIENCE

**Assistant System Administrator** October 2015 - Present

*Argonne National Laboratory*, Lemont, IL

- Installed scientific packages from source code with multiple compilers and MPI implementations
- Collaborated on Python open source supercomputing package manager hosted on GitHub
- Overhauled Continuous Integration (CI) infrastructure using unit tests and flake8 through Travis CI
- Debugged node hardware, GPFS mounting problems, and InfiniBand network issues
- Unracked, moved, and reracked fully loaded servers hosting 1.2 petabytes of storage nodes

**Associate Software Engineer** June 2014 - September 2015

*Lockheed Martin*, Owego, NY

Infrastructure Analytics program (IA)

- Worked on a NYSEG/Iberdrola contract to develop software to detect downed power lines and flooding
- Enhanced simulator for modeling LiDAR data of a town with houses, trees, poles, and power lines
- Programmed primarily in C# in a .NET Framework using Microsoft Visual Studio
- Investigated several different Continuous Integration (CI) software tools for build and test automation

Remote Computer Reader program (RCR)

- Worked on the image processing software used by the USPS to sort and deliver mail
- Conducted a Failure Mode and Effects Analysis to track down bugs and discover monetary potential
- Enhanced Performance code (C) and overhauled internal testing tools (Perl, Bash, Python)
- Wrote Expect script to run Makefiles, ssh into remote machine, and ftp tar files to test bench
- Cleared for a Secret Security Clearance to access classified address databases

**Collections Assistant** September 2010 - January 2012

*Paleontological Research Institution*, Ithaca, NY

- Inventoried and relabeled older, more delicate specimens for organization and preservation
- Renovated and reorganized upper collections under NSF grant, allowing for easier access for researchers
- Cataloged Zinsmeister collection and updated the master database of specimens
- Documented and photographed Syracuse University collection journals

### RESEARCH EXPERIENCE

**Undergraduate Research Assistant**, with Professor Matthew E. Pritchard May 2013 - May 2014

*Department of Earth and Atmospheric Sciences, Cornell University*, Ithaca, NY

- Applied remote sensing techniques, such as feature tracking, to study the Russian High Arctic
- Investigated effects of climate change on glacial velocities, calving rates, and ice shelf breakup
- Processed ASTER and Landsat satellite imagery using GMT, AROP, and ROI\_PAC software
- Wrote Python, MATLAB, and Bash scripts to automate rapid processing of data
- Designed new method of noise removal based on the comparison of each pixel with its nearest neighbors

**Undergraduate Research Assistant**, with Professor Larry D. Brown August 2012 - May 2013

*Department of Earth and Atmospheric Sciences, Cornell University*, Ithaca, NY

- Studied the application of seismic interferometry to monitor magma reservoir inflation at Montserrat
- Researched effects of seismic attenuation on aftershocks
- Analyzed aftershock records from dense station arrays in Maine and Virginia

## TEACHING EXPERIENCE

### Teaching Assistant

May 2014 - June 2014

*Department of Earth and Atmospheric Sciences, Cornell University, Ithaca, NY*

- Served as a Teaching Assistant for *Satellite Remote Sensing Training for Biological Oceanographers* course
- Taught an intensive graduate course composed of 20 oceanographers from around the world
- Wrote Python lesson plan from scratch and answered questions about Python and IDL programming
- Debugged satellite image processing scripts and managed Python module installation from source code

### Undergraduate Python Consultant

January 2014 - May 2014

*Department of Computer Science, Cornell University, Ithaca, NY*

- Helped teach *Introduction to Computing using Python* and *Transition to Object-Oriented Programming*
- Facilitated learning in a weekly lab session of 36 students, troubleshoot assignments, and graded exams
- Held weekly consulting hours, working one-on-one with students to help clarify course material

### Undergraduate Teaching Assistant, PhysTEC Program

August 2012 - December 2013

*Department of Physics, Cornell University, Ithaca, NY*

- Taught course material for *Introduction to Mechanics*, *Heat/Electromagnetism*, and *Oscillations, Waves, and Quantum Physics* courses to 50+ students
- Led cooperative discussion and laboratory sections to promote understanding of physics material
- Coordinated homework study groups to encourage collaboration on homework assignments

### Ecology / Conservation Director

Summers 2008 - 2012

*Camp Barton, Boy Scouts of America, Trumansburg, NY*

- Managed a department of 6 staff members, training them to become ecology counselors as well as leaders
- Instructed between 3 and 5 weekly merit badges to up to 30 boy scouts ranging in age from 10 to 18
- Rewrote lesson plans for all 20 merit badges, working with counselors to address various shortcomings
- Established new off-site ecology program, introducing scouts to advanced topics at outside organizations
- Maintained Camp Conservation Plan and oversaw conservation projects led by each Boy Scout troop

## PUBLICATIONS

- Melkonian, A. K., Willis, M. J., Pritchard, M. E., & Stewart, A. J. (2016). Recent Glacier Velocities and Thinning at the Novaya Zemlya Icefield. *Remote Sensing of Environment*, 174, 244-257.

## HONORS AND AWARDS

Frank H. T. Rhodes Award	2014
Michael W. Mitchell Prize	2013
Dean's List	2010 - 2014
Gertrude Spencer Prize Honorable Mention	2011
Lockheed Martin Foundation Scholarship	2010
Eagle Scout	2008

## OUTREACH AND LEADERSHIP EXPERIENCE

Mentor for New Visions Job Shadowing Program at Lockheed Martin	2015
Test Proctor for Cornell Science Olympiad Invitational	2015
President of Science of Earth Systems Student Association	2012 - 2014
Tae Kwon Do Team	2011 - 2012
Executive Board of Cornell Ski and Snowboard Club	2010 - 2012
Boy Scouts of America	2002 - 2012
Volunteer in Collections Department of Paleontological Research Institution	2010 - 2011

## COMPUTER SKILLS

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### Programming Languages

Python, Bash, Perl, Ruby, C, C#, Java, MATLAB, JavaScript, Make, Expect, Tcl, IDL

### Markup Languages

LaTeX, Markdown, reStructuredText, HTML, CSS

### Software

VCS: Git, CVS, GitHub, GitLab

CI: Travis CI, Flake8, Sphinx

Text Editors: Vim, Sublime Text, Visual Studio, Eclipse

Atlassian: Jira, Confluence, Crucible

Other: GNU Debugger, SoftEnv

### Platforms

Linux (Fedora, RHEL, CentOS, Ubuntu, Mint), macOS, Windows