

# Annaleah Ernst

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## EDUCATION

**Harvard University**, Cambridge, MA — Class of 2017

- ❖ Bachelor of Arts in Engineering Science: Electrical and Computer Track, 3.75/4.0 GPA
- ❖ Relevant Coursework: Physics (mechanics), Multivariable Calculus, Linear Algebra, Circuit Design, Computer Science, Functional Programming, Computer Aided Machine & Design
- ❖ Foreign Exchange: Harvard-Beijing Language Academy (Summer 2014)

**Nikiski Middle-High School**, Nikiski, AK — Class of 2013

- ❖ Valedictorian, Honors Diploma
- ❖ CS course at the University of Alaska: Windows Form Applications in Visual Studio (C#)

## EXPERIENCE

**Heliophysics Student Researcher; NASA / University of Alabama in Huntsville 2015**

Instructing other interns in computer science. Ran simulations of IBEX ribbon source on computing cluster with over a million particles. Edited multi-threaded C++ simulation code to support partial node use on cluster. Implemented large data-set visualization capabilities including writing binned data to file and a Python script to render images in VisIt. Presenting results at the American Geophysical Union fall conference in December.

**ATV Design, Engineering Sciences 51 Final Project; Harvard University 2014**

Team project. Designed ATV to compete in class obstacle course. Worked in SolidWorks to design and model the ATV, including gear train, chassis, wheels, tensioning pins, and motor casings. Laser-cut, CNC milled, and 3D-printed the parts for assembly. Ranked on leaderboard.

**Calenday 365, Computer Science 50 Final Project; Harvard University 2013**

Original final project: implemented a Windows 8 calendar app in Visual Studio. C# and XAML.

## SOFTWARE

- |  |                           |
|--|---------------------------|
| ❖ C, C#, C++   | ❖ Microsoft Visual Studio |
| ❖ Python   | ❖ Emacs, Gedit, Vi        |
| ❖ MATLAB, Mathematica                                      | ❖ SolidWorks, Eagle       |
| ❖ Experience: HTML, XAML, CSS, SQL, PHP, JavaScript, OCaml | ❖ VisIt, Grace            |
|  | ❖ Linux, Mac, Windows     |

## HONORS, AWARDS, & ORGANIZATIONS

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|--|--|
| ❖ 2013 United States Presidential Scholar  | ❖ 2013 Masonic Student of the Year         |
| ❖ Honored by 2014 Alaska State Legislature | ❖ 2012 Alaska Girls State Governor         |
| ❖ Radcliffe Choral Society (ongoing)       | ❖ WECODE-Women in Engineering (2015)       |
| ❖ Taekwondo; Registration Chair (ongoing)  | ❖ National Honor Society; President (2013) |
| ❖ Harvard Radcliffe Drama Club (2015)      | ❖ Student Council; President (2011-2012)   |

## SKILLS

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| ❖ Proficient in Mandarin Chinese         | ❖ Fabrication of Handmade Toys             |
| ❖ 3D Design                              | ❖ Poultry Raising and Showmanship          |
| ❖ Computer Aided Design and Machining    | ❖ Drama/Debate; Performance/Tech           |
| ❖ Microcontroller Design and Fabrication | ❖ Juggling, Bookbinding, & other novelties |