

# Akshay Ravikumar

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## Education

**Massachusetts Institute of Technology (MIT)**  
**Candidate for a Bachelor's of Science in EECS**

**Cambridge, MA**  
**Graduation: June 2018**

Completed Coursework: Intro to EECS, Relativity, Multivariable Calculus

Spring 2015: Computation Structures, Math for Computer Science, Algorithms, Probability and Random Variables, Differential Equations, Microeconomics

**Foothill High School**  
**2<sup>nd</sup> Rank in a Class of ~600, GPA: 4.45 (weighted)**

**Pleasanton, CA**  
**August 2010 – June 2014**

Relevant Coursework: AP Physics Mechanics, AP Physics Electricity/Magnetism, AP Chemistry, AP Computer Science, AP Calculus BC, AP Statistics, AP English, AP Spanish IV, AP Psychology

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## Research Experience

**MIT Space Systems Lab (SSL)**  
**Researcher**

**Cambridge, MA**  
**October 2014 – Present**

- Upgrading the C++ framework for SPHERES satellites and testing/implementing Open CV computer vision algorithms that enable the satellites to dock to each other

**MIT Computer Science and Artificial Intelligence Laboratory**  
**Researcher**

**Cambridge, MA**  
**October 2014 – December 2014**

- Implemented programs on Arduino and PIC32 microcontrollers to help create a system to bring cheap, efficient power to Indian villages

**Stanford Institute of Medicine Research (SIMR) Program**  
**Researcher**

**Palo Alto, CA**  
**June 2013 – August 2013**

- Directed a three-person project to computationally analyze prostate cancer biomarkers
- Used C++/Java/R to identify trends in protein stability, amino acid composition, etc.

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## Work/Leadership Experience

**EmbedUR Systems**  
**Software Engineering Intern**

**Fremont, CA**  
**January 2015**

- Pioneering the migration of a C-based Radio Resource Management (RRM) Algorithm from MySQL to Cassandra, a distributed database management system

**Art of Problem Solving**  
**Class Grader/Assistant**

**Cambridge, MA**  
**September 2014 – Present**

- Assisting in online math/computer science classes, and providing feedback on students' homework

**Pleasanton Math Circle ([pleasantonmathcircle.com](http://pleasantonmathcircle.com))**  
**Co-founder and Lecturer**

**Pleasanton, CA**  
**November 2011 – June 2014**

- Founded a math circle to education 30 – 80 middle school students on abstract math concepts

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## Awards/Honors

- First Place in the Media/Advertising Category at the 2014 Harvard Hackfest
- Silver division of the USA Computing Olympiad, an algorithmic programming competition in C++
- Two-time USA Math Olympiad Qualifier, Two-time USA Junior Math Olympiad Qualifier

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## Skills

- Considerable experience with C++, Python
- Basic experience with Javascript, C, jQuery, Java
- Experience with PIC Microcontrollers
- Strong mathematical background
- Currently pursuing independent web development (node.js, express.js, socket.io, etc.)