Vahid Fazel-Rezai

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Education	**Massachusetts Institute of Technology**	Early Sophomore Standing, June 2018

— Major: Electrical Engineering and Computer Science (Course 6-2)   *Cambridge, MA*
— Courses: *18.03* Differential Equations, *6.01* Intro EECS, *6.004* Computation Structures (current),
   6.006 Intro Algorithms (current), *6.036* Intro Machine Learning (current), *18.440* Probability (current)

Phillips Exeter Academy   June 2014
— Graduated with High Honors   *Exeter, NH*
— Courses: Linear Algebra, Electronics, Cryptography, Game Theory, Intro Real Analysis

Research | **Space Systems Lab**   9/14−present
— SPHERES satellites, with Undergraduate Research Opportunities Program   *Mass. Institute of Tech.*
— Improving and testing software that integrates images from three types of cameras into single 3D point cloud

Genetics Research   3/14−6/14
— Crossed *Drosophila* to create stable lines with gene inserted for fluorescence   *Phillips Exeter Academy*
— Dissected and imaged flies to identify gene expression, collaborating with Seung Kim Lab at Stanford Univ.

Independent Math Research   2/13−9/13
— MIT Program for Research In Mathematics, Engineering and Science   *Mass. Institute of Tech.*
— Identified useful methods and classified families of permutations according to novel set of relations
— Presented at 2014 Mathematical Association of America Undergraduate Student Poster Session

Computational Biochemistry Lab   10/11−3/12
— Simulated peptide structure in varying conditions, 65 hours in Linux and C   *Univ. of North Dakota*

Independent Math Research   1/11−5/11
— Examined sets of intersections points of polygon diagonals using MATLAB   *Grand Forks, ND*
— Identified geometric patterns of interest and generalized to continuous sets of points

Publications | Vahid Fazel-Rezai. Equivalence Classes of Permutations Modulo Replacements Between 123 and Two-Integer Patterns. *Electronic Journal of Combinatorics*, 21(2):#P47, 2014.

Work | **Grader**   9/14−present
— Grading and giving written feedback for online programming and math problems   *Art of Problem Solving*

Product Innovation Specialist   12/14−1/15
— Researched and designed products with potential for small-scale solar electricity in Nepal   *Recharge Labs*

Problem Director   8/13−1/14
— Oversaw writing of 67 problems and solutions and grading for 180 students   *Exeter Math Club Competition*

Activities | Time Capsule To Mars   2015

various hackathons (5 so far)   2014−2015

Harvard-MIT Math Tournament, staff/photographer   2014−2015

Phillips Exeter Academy Science Bowl Team, co-founder and captain   2013−2014

Awards | Fourth Place and Most Responsive Design, MIT Web Programming Competition (http://fleekon.me)   2015

Bronze Medal, Asian Pacific Math Olympiad   2014

Semifinalist, Intel Science Talent Search   2014

Honorable Mention, Canadian Math Olympiad (7th place)   2014

Siemens Award for Advanced Placement   2012

Fourth Award in Mathematics, Intel International Science and Engineering Fair   2011

Winner, USA Junior Math Olympiad (6th place)   2011

Skills | Python, C++, C, Java, LaTeX, Linux, Git, JavaScript, Node.js, HTML, CSS, MATLAB, BASIC