

Sonia Sehra

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EDUCATION

HARVEY MUDD COLLEGE

BS IN MATHEMATICS AND
COMPUTER SCIENCE

Expected May 2020 | Claremont, CA

HORACE MANN SCHOOL

Grad. June 2015 | Bronx, NY

Graduated with Honors in Computer
Science and Sciences

LINKS

Github:// [soneshmones](#)

LinkedIn:// [soneshmones](#)

Twitter:// [@SoniaCSehra](#)

COURSEWORK

UNDERGRADUATE

Data Structures and Program
Development

Computability and Logic

Principles of Computer Science

Number Theory and Cryptography

Discrete Mathematics

Linear Algebra and DEs I & II

HIGH SCHOOL

Graph Theory

Knot Theory & Topology

Number Theory

Robotics

SKILLS

LANGUAGES & TECH

Practiced:

Java • C++ • Matlab

Git • R • Python • Perl • \LaTeX

Familiar:

iOS • Android • Go-Lang

OTHER:

EXPERIENCES & ACTIVITIES

Judged HackMann hackathon in 2016 •

Harvey Mudd Putnam Team •

Black Belt in Shotokan Karate •

Rock Climber • Coached Middle School

MathCounts • Part-Time Volunteer

mentor for non-profit HackerFund •

MuddHacks Organizer • Caption of

Basement Lions Robotics Team •

Claremont Greenshirts Ultimate Frisbee

Team • Math Coach • Private Tutor •

Lead organizer & problem writer of

Caltech Harvey Mudd Math Tournament

EXPERIENCE

STUDENTRND | REGIONAL MANAGER AND LEAD EVANGELIST

Aug 2013 - Sep 2016 | New York, NY

- Non-profit promoting STEM education to teens. I organized and evangelized educational hackathons three times a year.

STEAM : CODERS | TEACHER

Sep 2016 - Dec 2016 | Claremont, CA

- Taught underprivileged middle schoolers how to code.

COLUMBIA TUTORING AND LEARNING CENTER | TEACHER

Jan 2016 - June 2016 | New York, NY

- Taught high school mathematics in lower-income schools.

HUNT LAB: CYSTIC FIBROSIS | UNDERGRADUATE RESEARCHER

May 2014 - Aug 2016 | Columbia University biophysics

- Developed and optimized a chimeric protein model of the Human CFTR protein with E Coli for use in drug screening. Paper written for Siemens.
- Competed in NYCSEF, first round of the Intel Science and Engineering Fair competition.

PROJECTS

CHRONOBOT | CURRENT SIDE PROJECT

www.choronobot.co

Automated time management. Predictive time management app to efficiently create recurring daily schedules automatically. Works with the user to keep on tasks.

CHUNKYSTRING DATA STRUCTURE | CS70

Designed and implemented string-like data structure in C++.

K-TO-2K TREE | CS70

Designed, implemented, and wrote self balancing tree of arbitrary node size in C++.

BULGARIAN SOLITAIRE | HIGH SCHOOL SENIOR MATH SEMINAR TALK

Created new variations on the mathematical game "Bulgarian Solitaire" and discovered interesting relations between patterns in the game and arithmetic sums - tetrahedral numbers.

TRIGQUIZZER | GENERATES AND SOLVES TRIGONOMETRY PROBLEMS

Created for Horace Mann Mathematics dept for teaching Algebra II and Trigonometry.

YAHTZEE | JAVA APPLET

Wrote the classic dice game in Java.

AWARDS

2014	Top 10%	NCWIT National Runner Up
2014	National	MIT's Math Prize for Girls
2014	National	4 AIME I
2015	1/168	Joan Brady Bowen Award
2016	N/A	NCWIT Change Leader Scholar