

# NEIL MALUR

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Current high school junior looking to pursue a computer science major in college. Interested in conducting research in applied machine learning and natural language processing with other interests in math and business.

## Education

**Weston High School**, Weston, MA

Anticipated Graduation June 2021

**Selected Awards:** National Honor Society, Seal of Biliteracy, National Latin Exam Gold Medal (2), AIME Qualifier (2)

**Relevant Coursework:** AP CS, AP Physics C, AP Calculus BC, DE Economics, AP World History, AP US History, AP Latin

**Extracurriculars:** Debate Team (captain, co-founder, varsity), Computer Science Team (president), DECA, Science Team, Math Team, BioBuilderClub, Robotics Team, Latin Club, Garden Club, Badminton Club

**GPA:** 4.00 (unweighted) · 4.60 (weighted)

**SAT:** 800 (Math II) · 800 (Physics)

## Research Experience

**Harvard-MIT Biomedical Cybernetics Laboratory**

2018 – present

Conducting research in computational biology under the mentorship of Prof. Gil Alterovitz and Dr. Insung Na.

- Connected to due to participation in the **MIT PRIMES** Computer Science & Computational Biology program
- Working on improving **clinical trials accessibility** for participants by structuring eligibility criteria
- **First author** on two papers awaiting publication

**Independent Student Researcher**

2017 – present

Has completed and is working on a variety of independent research projects across fields and disciplines.

- **Predicted flu outbreaks** + severity with LSTM networks and won an Honorable Mention at the MSEF Science Fair
- Analyzed student political knowledge to **determine the benefits of lowering the national voting age**
- **Political sentiment analysis** on text with deep learning that won the MetroHacks III Most Entrepreneurial Award
- **Determined problem difficulty** due to its wording and **predicted urban demographics** from satellite imagery

**MIT PRIMES STEP**

September 2015 – May 2018

Conducted research in mathematics under the mentorship of Dr. Tanya Khovanova.

- Selective program to enrich the mathematical experience and knowledge of 7<sup>th</sup> - 9<sup>th</sup> graders
- Conducted **original mathematics research** and coauthored 4 papers, published in **MJUM** and **Math Horizons**

## Work Experience

**Software Developer Intern**

March 2019 – present

Currently developing software for both Conjuguemos, a language learning site with **more than 4.2 million students** and 32,000 schools worldwide, as well as KByte, a global computer science education company.

- Introduced, implemented, and maintains **search engine optimization** methodologies for Conjuguemos
- **Developed new features and pages** while upkeeping efficiency and minimizing server load at Conjuguemos
- Works on **frontend website design** and **backend database structuring** to aid teaching at KByte

**Computer Programming Intern**

June 2017 – July 2017

Worked as a programming intern at Columbia Threadneedle, a mutual fund company that manages about \$500 billion.

- Developed webpages on the frontend with backend data integration using the Salesforce platform

## Academic Achievements

**United States of America Computing Olympiad Gold Competitor**

January 2017 – present

International competition in computer science used to select the US team to the International Olympiad in Informatics.

- Top 1000 **global competitors** in USACO
- Uses **standard workplace algorithms**, such as Fenwick Trees, dynamic programming, and disjoint-sets

**Program in Mathematics for Young Scientists**

June 2019 – August 2019

Attended the PROMYS program, a highly selective and intensive program in mathematics.

- **Intensive mathematical study** with challenging daily problem sets in number theory
- Took courses in Algebra and Probability while **performing a lab** on Chebyshev polynomials of the first kind
- Invited back to be among about 20 advanced students performing **original mathematical research** in 2020

**DECA**

2017 – present

International competition in business, finance, and marketing to cultivate future leaders.

- **International Career Development Conference qualifier** in Business Finance in 2019 and 2020 (<5% qualify)
- **2<sup>nd</sup> and 6<sup>th</sup> place in Business Finance** at Massachusetts State Career Development Conference