

**Benjamin Spector**  
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## **Objective**

A summer internship where I can contribute to a science or computer science research project using my analytical and programming skills.

## **Education**

Horace Mann High School, Class of 2018

Current Junior: Cumulative GPA >3.95

Hoff Barthelson Music School (Scarsdale): cello (12 years), music theory through AP, chamber ensemble

## **Employment History**

Intern at Two Sigma Investments (June 2016-Present), Inventor and Co-Developer of [Halite](#) Online AI Programming Competition

## **Honors and Awards**

2nd Place at Hackmann (2015) and def hacks (2015), and 3rd Place at the Dalton Hackathon (2015)

Winner, Hudson Valley Music Club Annual Student Award Concert (for Spector Trio with Asher Spector Piano, Emily Spector Violin) (2015)

Winner, Hudson Valley Music Club Annual Student Award Concert (solo Cello) (2017)

## **Relevant High School Studies**

A+ average in science and math courses: AP Chemistry (current, A), AP Biology (current, A), Honors Physics (A), Chemistry (A+), Biology (A), Precalculus BC Honors (current, A+), Honors Trigonometry/Algebra 2 (A+), Honors Geometry (A+)

## **Standardized Testing**

2015: SAT II Biology - 800; Chemistry - 800; AP Music Theory - 5

2016: AP Physics 1 - 5; AP Physics 2 - 5; Physics SAT II - 800; PSAT - 1520 (max); ACT Combined - 36

## **Skills**

Skilled in C++ (including OpenGL), Java, Python; focus on analysis of algorithms and performance and increasingly machine learning (with special emphasis on reinforcement and transfer learning)

In-depth Scientific Research and Mathematical Analysis. Especially skilled at game theory

Proficient Rocketeer. Capable of designing and building composite solid-fuel motors

Excellent writer, presenter of technical ideas, and mentor to younger students

## **Extracurricular Activities**

Co-creator of programming competition: [halite.io](#), an online programming competition with ~1600 users from over 70 (self-reported) universities

Independent Research Project on applying transfer learning to the reinforcement learning of Atari 2600 game using generative adversarial networks

Platinum-level USACO participant (2016)

Member of Nationals Team for Horace Mann American Computer Science League Club (2016)

Co-leader of Horace Mann Programming Club

Head of Hardware for Horace Mann Robotics, FRC 5806 (Basement Lions)

Co-founder and leader of the Horace Mann Rocketry Club

Cellist since age of 5 - Only cellist from NYC Zone at 2016 NYSSMA All-State Winter Festival

Year-round Table Tennis and Tennis Player

## **Previous Summer Programs**

Johns Hopkins University Center for Talented Youth (CTY): Inductive & Deductive Reasoning (2012), Introduction to Computer Science (2013), and Game Theory & Probability (2014)

Music at Port-Milford, Ontario (2014)

Robotics (2010) and 3D Modeling at Stanford Summer Program (2011)