Simon Beyzerov

sbeyzerov@gmail.com

Education

Massachusetts Academy of Math & Science at Worcester Polytechnic Institute

August 2021 - May 2023

11th Grade:

Clubs/Activities: *Programming Team, Math Team, CyberPatriot Cybersecurity Club, Disc Golf*

Medway High School

September 2019 - June 2021

GPA: 4.19/4.2 (UW) 6.77/7 (W)

Clubs/Activities: *Math Team, Science Olympiad*

Research Experience

Student Researcher

MIT-PRIMES

January 2021 - Present

Completed year-long graduate-level research projects in cryptography under the mentorship of Sacha Servan-Schreiber (MIT)

- Studied complexity theory and more broad theoretical computer science concepts
- Experience in both theoretical and applied cryptographic analyses
- 2021 Cycle:
  - Studied anonymous access-control, zero-knowledge proofs, and multi-party computation towards the development of an anonymous authentication system.
- 2022 Cycle:
  - Currently studying verifiable computation, computational complexity theory, and distributed-trust models for privacy-preserving systems.

Projects

Cloak: A Versatile Framework for Anonymous Authentication

Sacha Servan-Schreiber, Simon Beyzerov, Eli Yablon

2021 - Present

Cryptography

- Written in Conjunction with MIT-PRIMES
- Worked on developing cryptographic protocols and zero-knowledge proofs for anonymous access-control/authentication.

Metadata-hiding Anonymous Communication with Authenticated Reading & Writing

Simon Beyzerov, Sacha Servan-Schreiber

2021 - Present

Cryptography

- Independent research project
- Development of cryptographic protocols for anonymous communication

SigmaML

2022 - Present

Machine Learning & Software Development

- Developing a dedicated desktop application for building machine-learning models and streamlining the development process.
- Handled front-end and back-end interfacing of the application, along with general functionality
- Electron, Svelte, Javascript, Python, CSS, HTML

PRIMES 2022 Project

Simon Beyzerov, Sacha Servan-Schreiber

2022 - Present

Cryptography

- Working on further cryptographic research in conjunction with MIT-PRIMES

Coursework

- Matrices & Linear Algebra I (Dual Enrollment through WPI)
- Calculus IV (Dual Enrollment through WPI)
- Calculus III (Dual Enrollment through WPI)
- AP Physics C: Mechanics
- AP Physics C: Electricity & Magnetism
- AP Computer Science
- *All Advanced Courses at Massachusetts Academy of Math & Science*

Achievements

Tests and AP scores:

- **SAT:** 1570
- **PSAT:** 1500
- **SAT Math II:** 800
- **AP Calculus BC:** 5
- **AP Physics 1:** 5
- **AP Computer Science Principles:** 5

Awards/Achievements:

- American Invitational Math Exam (AIME)
- Massachusetts Association of Math Leagues MAML2 Qualifier *(top 100 scores)*
- New England Math League Top Scorer (2021)
- HiMCM Math Modeling Meritorious Award
- CyberPatriot Cybersecurity Competition Platinum Division
- USA Computing Olympiad Silver
- MathWorks Math Modeling 2nd Round Advancement (top ~18%)
- AP Scholar with Honor

Experience & Skills

Academic/Research:

- Research
- Theoretical Computer Science
- Cryptography
- Algorithms & Data Structures
- Algebra & Group Theory
- Artificial Intelligence & Machine Learning

Software:

- LaTeX
- Matlab
- Mathematica
- Microsoft Office (Excel, etc..)
- Adobe (Premiere, AE, Illustrator)

Languages:

- Go
- JavaScript
- Java
- Python
- C++/C
- HTML/CSS