

## Education

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### Massachusetts Institute of Technology – Cambridge, MA

Anticipated Graduation 2024

B.S. in Mathematics and Computer Science

Relevant Coursework: Abstract Algebra I, Introduction to Algorithms, Interconnected Embedded Systems

### Westside High School – Omaha, NE

Aug 2017 – May 2021

4.0 GPA, 1570 SAT

## Skills and Projects

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### WHS Scheduler

- iOS/Android app with >8000 downloads helping Westside High School students check their schedule and next classes that change day-to-day and meet with teachers without relying on paper
- Designed, developed, and maintained app for 4 years and added backend for school administration access
- **Built with React, React Native, TypeScript, REST, Node, Express, MongoDB, Adobe XD and Illustrator**

### Median

- Browser extension with >100 users that allows you to code in and display LaTeX equations on the blogging site Medium
- Reverse-engineered the Medium blogging website to simulate image drag-and-drop through code
- **Built with JavaScript, Adobe Illustrator**

### Finale

- Web app for Westside High School students to sign up for final exams in real-time and teachers to schedule exams
- Implemented backend that bridged the .NET/SQL Server school database and the app's PostgreSQL database
- **Built with Ruby, Rails, PostgreSQL, Azure SQL Server**

## Experience

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### MIT Media Lab – Cambridge, MA

Jan 2022 – Feb 2022

#### Undergraduate Researcher, Signal Kinetics Group

- Led frontend team of the Indoor IoT project, using RFID tags and SLAM techniques to map and place items in 3D
- Developed frontend app in React, D3.js, WebGL, and GraphQL to interact with scanned 2D and 3D maps, items

### University of Nebraska Omaha – Omaha, NE

#### Student Researcher, Department of Mathematics

Summer 2021

- Reviewed graduate research on classifying Galois p-groups via their related extensions
- Wrote scripts in GAP, a language for computational discrete algebra, to check results

#### Teaching Assistant, Department of Mathematics

Jan 2021 – May 2021

- Graded homework and exams for Number Theory and Cryptography course
- Held weekly office hours over Zoom

#### Student Researcher, Department of Mathematics

Summer 2020

- Solved a certain class of non-linear Diophantine equations via their related elliptic curves
- Published paper as sole author, *Bulletin of the Australian Mathematical Society, Vol 104 (1), 21 - 28*
- Wrote scripts in Python and SageMath to automate calculations

#### Intern, Midwest Applied Lab of Cybersecurity and Education (MALICE)

Summer 2018, 2017

- Created UIs in D3.js and Ember.js for Cybertrust, a graduate project researching how users fall victim to phishing
- Wrote lessons and coding challenges for GenCyber, a camp for grades 6-12 teaching cybersecurity

## Leadership and Involvement

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### MIT Code for Good Consulting

- Organized weekly meetings with nonprofit and handled product delivery, taught HTML, CSS, JavaScript to peers

### Saxophone Section Leader, Westside Marching, Concert, and Jazz Bands

- Taught music and marching in small groups and one-on-one
- Organized and ran weekly rehearsals after and before class, get-togethers for section bonding

### MIT Festival Jazz Ensemble, MIT Infinite Fashion Magazine, UI/UX@MIT, IEEE/ACM

## Awards

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Winner in Jazz, National YoungArts Competition

2021

Top 15 of >5600, Breakthrough Junior STEM Video Challenge

2020