SAMUEL HARSHE

Yale University 2024.5 | Mathematics Major & Soccer Player | New Haven & Ann Arbor | (734) 548-3005
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SUMMARY

Ambitious mathematics major with wide-ranging interests and uncertainty about career path. Greatest strengths are versatility and intensity. Equally comfortable programming, working with mathematical and physical models, and applying interest in philosophy and literature through non-technical problem solving. Demonstrated interest in tech through independent studying and projects. History of a distinguished work ethic on elite teams.

EDUCATION

Yale University, New Haven, CT   BS in Mathematics Expected December 2024.
- Current GPA: 3.6
- Technical courses: *Linear Algebra with Proofs*, *Advanced Linear Algebra*, *Ordinary Differential Equations*, *Analysis 1*, *Vector Analysis and Linear Integration on Manifolds*, *Discrete Mathematics*, *Mathematical Logic*, *Set Theory*, *Renewable Energy*, *Classical Mechanics*.

Dexter High School, Dexter, MI   Graduated 2020.
- Class rank: 1st of 291.
- Perfect SAT as 15 year-old.

PROJECT AND WORK EXPERIENCE

NASA   June - August 2023
Researched and published two papers on drone medical deliveries in low and moderate income countries. Gained close familiarity with current topics in human development, global healthcare, drone technology, and aeronautic regulation.

Paved.io   May - August 2022
Built a website and researched geo-engineering and nuclear energy climate solutions in a self-directed internship, collaborating with MIT and Yale engineering students. Paved.io is a highly selective incubator of early tech talent.

Machine Learning Independent Study   August 2019 - Present
Completed Andy Ng's *Machine Learning*. Used Beautiful Soup to scrape data and Python ML libraries to predict the winners of NBA games better than FiveThirtyEight and Las Vegas. Worked independently on the topic since high school.

PROGRAMMING

- Python, including scikit-learn, Keras, TensorFlow, pandas, NumPy, Matplotlib, and Beautiful Soup (highly proficient).
- HTML/CSS and Shopify site development (intermediate).
- JavaScript (intermediate)
- Java (beginner/intermediate).
- Data structures and algorithms (intermediate—completed Steven Skiena's *Analysis of Algorithms* course online).
- Quantum computing (beginner—completed *Quantum Computing for the Very Curious* course online).
- Swift (beginner).
- Git and command line tools.

OTHER SKILLS

- Natural languages: Spanish (C1); French (B1/B2). Working toward native fluency.
- Writing: Majority of courses so far taken at Yale have been writing-based. Amateur essayist, poet, and journaler.

SOCCER

Yale University Men's Soccer   August 2020 - Present.
Appeared in all 16 games, starting 10, as a sophomore in 2022. Appeared in 9 games, starting 2, as a freshman in 2021.

Loudoun United FC   March - May 2021, June - August 2022, July 2023.
Trained with professional soccer team Loudoun United, DC United's second team (US 2nd division), and occasionally also with DC United (US 1st division). Could not play in games per NCAA rules.