

DEAN BARROW

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EDUCATION

Stanford University: 4.081/4.0 GPA 2027

B.S. in Mathematics, M.S. in Computer Science

Organizations: TreeHacks, Stanford Startup Society, ASES, Stanford Pre-Business Association

Selected Coursework: Math 51 (Multivariable Calculus & Linear Algebra), CS 107 (Systems), CS 106B (DSA), Math 56 (Real Analysis), CS 109 (Probability Theory), CS 103 (Mathematical Proofwriting)

Skills: C++, Python, Java, L^AT_EX, GitHub, Public Communication, Literature Review, Statistics

Illinois Mathematics and Science Academy: 3.96/4.0 GPA, SAT 1550 (800M/750 RW) 2023

High School Diploma

Organizations: Math Team Captain, Future Business Leaders of America, Future Health Professionals

Selected Coursework: Differential Equations, Abstract Algebra, BC Calculus, Object-Oriented Programming, Machine Learning, Modern Physics

EXPERIENCE

Stanford Empirical Security Research Group, *Researcher* March 2024 - Present

- Spearheading the implementation of DNSSEC adaptation for ZDNS to enhance DNS security and integrity
- Conducted in-depth analysis of historical RFCs on DNS, leveraging the DO bit to transmit the DNSSEC flag effectively
- Utilized the Go programming language to develop robust security solutions and optimize existing protocols

TreeHacks, *Board Member* October 2023 - Present

- Organized and coordinated technical workshops, engaging top-tier mentors and professors to provide learning experiences for attendees
- Contributed significantly to logistics and sponsorship efforts for one of the world's largest hackathons, ensuring smooth event execution and participant satisfaction
- Played a pivotal role in securing 275k in sponsorships, significantly boosting the event's resources and reach
- Strategically marketed the Stanford hackathon to universities nationwide, enhancing its reputation and attracting a diverse and talented pool of participants

Jane Street, *Student* July 2023 - August 2023

- Selected as **one of 70** students in the US for Jane Street's Academy of Math and Programming (AMP)
- Extensive 5 week program learning probability theory, set theory, number theory, and algorithmic programming
- Competed in Hackathon at Jane Street's office working on algorithm to maximize profit in market
- Mentored from leading mathematicians **Alex Song** and **Po Shen Loh**

Fermi National Accelerator Laboratory, *Researcher* May 2021 - June 2023

- Conducting experimental research on behalf of the CMS collaboration at the Large Hadron Collider (LHC), CERN
- Participating in search for **dark photons** and **doubly charged Higgs boson** event signatures in four-lepton final states
- Analyzed event reconstruction of **lepton jets**, discovering favored decay mechanisms of backgrounds in irregularly high-energy four-lepton final states
- Implemented program to filter out triggers with maximum efficiency

AWARDS

Cal Hacks 3rd Place, *International* 2023

Placed 3rd overall against 250+ teams at the world's largest collegiate hackathon hosted by UC Berkeley

Wharton Global Pitch Competition 3rd Place, *International* 2022

Placed 3rd in international pitch competition hosted by Wharton

FBLA National Finalist, *National* 2022

Competed in Business Management for Future Business Leaders of America

Coca-Cola Scholarship Semifinalist, *National* 2022

Chosen as one of 1,557 semifinalists out of 91,000 applicants

HOSA State 1st Place, *State* 2023

Competed in Cultural Diversity & Disparities in Healthcare for Future Health Professionals