Noah Singer

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Education

Spring 2022 (anticipated) **A.B. in Computer Science and Mathematics**, *Harvard University*, Cambridge, MA, GPA 4.00/4.00.

Selected Coursework

Computer Science: Computational Complexity; Error-Correcting Codes; Cryptography; Spectral Graph Theory; Operating Systems; Systems Security; Algorithms. *Mathematics*: Algebraic Geometry; Boolean Functional Analysis; Commutative Algebra; Measure Theory & Functional Analysis.

Experience

Papers

Jan. 2021 **Point-hyperplane incidence geometry and the log-rank conjecture**, *Noah Singer and Madhu Sudan.*
Supported by Herchel-Smith Fellowship over Summer 2021. On arXiv.

Dec. 2020 **Color Me Converged: Surveying and experimenting on the Glauber dynamics for sampling k-colorings**, *Noah Singer and Grace Tian*, Harvard CS 229r (Prof. Salil Vadhan).

June 2020 **The Fiat-Shamir heuristic**, *Noah Singer*, Harvard CS 127 (Prof. Boaz Barak).
In preparation.

Teaching

Hosted office hours, graded exams and problem sets, and organized sections as an undergraduate Teaching Fellow, in the following courses: *CS 124: Data Structures and Algorithms* (Spring 2021), *CS 121: Introduction to Theoretical Computer Science* (Fall 2019, Fall 2020), and *CS 161: Operating Systems* (Spring 2020). In CS 121, organized "CS 121.5", advanced section with weekly guest lectures.

Talks

Jan. 2021 **Point-hyperplane incidence geometry and the log-rank conjecture**, *National Collegiate Research Conference.*

Oct. 2020 **Relativization in complexity theory**, *Harvard Math Table.*

Internships

Summer 2019 **Software Engineering Intern**, *Airbnb*, San Francisco, CA.
Built a production data pipeline to discover and manage large quantities of search advertising keywords targeting Airbnb hosts, efficiently scaling up listing creation due to search ads by over 20% and generating tens of thousands of dollars in weekly revenue.

Community Involvement

Fall 2020–present **Peer Concentration Adviser**, *Harvard University Department of Computer Science.*

Fall 2020–present **WiCS Mentor**, *Harvard Women in Computer Science.*

Spring 2019 **Digital Literacy Project**.
Volunteered at Digital Literacy Project, teaching basic programming in Scratch and Processing.js to middle school students in Allston.

Awards

Summer 2020 **Herchel-Smith Fellowship**.
Received highly competitive summer research funding from Harvard.

Fall 2019 **Certificate of Distinction in Teaching**.
Awarded for >4.8/5 average section rating in Q Guide evaluations in teaching CS 121.

2018-2020 **John Harvard Scholar, Detur Book Prize**.

Updated January 26, 2021.