Alexander Wei

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Education

Ph.D., *Computer Science*, UC Berkeley 2020–

S.M., *Computer Science*, Harvard University 2019–2020

A.B., *Computer Science and Mathematics*, Harvard University 2016–2020
Honors: *Summa cum laude*, *Hoopes Prize*, *Phi Beta Kappa*, *Detur Book Prize*
Secondary field: *Economics*

Diploma, Phillips Exeter Academy 2012–2016

Fellowships

* NSF Graduate Research Fellowship (2020–2023).
* Siebel Scholarship (2019–2020).
* Goldwater Scholarship (2019–2020).
* Herchel Smith Research Fellowship (2018).

Awards and Honors

* CRA Outstanding Undergraduate Researcher Award (2020).
* SODA Best Student Paper (2019).
* Honorable Mention, USA Math Olympiad (2016).
* Gold Medal, International Olympiad of Informatics (2015).

Publications

** indicates alphabetical order.*

* Better and Simpler Learning-Augmented Online Caching. *Proceedings of the 23rd International Conference on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2020).*
  Alexander Wei.
* Allocation for Social Good: Auditing Mechanisms for Utility Maximization. *Proceedings of the 2019 ACM Conference on Economics and Computation (EC 2019)*.
  Taylor Lundy, Alexander Wei, Hu Fu, Scott Duke Kominers, and Kevin Leyton-Brown.
* Optimal Las Vegas Approximate Near Neighbors in ℓ_p. *Proceedings of the Thirtieth Annual ACM-SIAM Symposium on Discrete Algorithms (SODA 2019)*.
  Alexander Wei.
  SODA 2019 Best Student Paper.

* Varying the Number of Signals in Matching Markets. *Proceedings of the 14th Conference on Web and Internet Economics (WINE 2018)*.
  Meena Jagadeesan* and Alexander Wei*.

Manuscripts

* Optimal Robustness-Consistency Trade-Offs for Learning-Augmented Online Algorithms. *Manuscript in preparation.*
  Alexander Wei* and Fred Zhang*.
* [Research project in browser security.] *Manuscript in preparation.*
  Meena Jagadeesan*, Alisha Ukani*, Alexander Wei*, and James Mickens.

Work Experience

* Research Intern, *Microsoft Research* Summer, 2020
  - Research intern at Microsoft Research New England working in the EconCS group.
* Quantitative Research Intern, *D. E. Shaw & Co.* Summer, 2019
  - Conducted quantitative research and built scalable machine learning infrastructure for systematic equities trading.
* Software Engineering Intern, *Google* Summer, 2017
  - Worked on natural language processing for Google Search; contributed new algorithms to improve semantic annotation of search queries and webpages.
* Software Engineering Intern, *General Electric* Summer, 2016
  - Performed full-stack web development at GE Global Research (Niskayuna).

Teaching

* Teaching Fellow, *CS 124: Data Structures and Algorithms*, Harvard University Spring, 2018
  - Awarded *Certificate of Distinction in Teaching* by the Derek Bok Center.
* Teaching Assistant, *[Advanced topics for math competitions.]*, IDEA MATH Summer, 2015

Presentations

* Optimal Las Vegas Approximate Near Neighbors in ℓ_p.
  - Symposium on Discrete Algorithms (SODA) 2019 (January 8, 2019).
* Varying the Number of Signals in Matching Markets.
  - Conference on Web and Internet Economics (WINE) 2018 (December 17, 2018).
  - Frontiers of Market Design @ EC 2018 (June 22, 2018).

Programming Skills

Experienced with *Python* (including *PyTorch*, *Pandas*, and *Numpy*), *C/C++* (for systems and high performance code), and LaTeX. Familiar with *JavaScript*, *Java*, *HTML*, and *CSS*.