Alek Westover
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Education

- Massachusetts Institute of Technology: 2022-present
  Studying math and computer science
- MIT PRIMES: (research program for highschool students) 2019-2020
  Mentor: William Kuszmaul
- Canada/USA Mathcamp 2019

Awards

- Regeneron Science Talent Search: $70,000 prize, 7th place in USA, 2020
  "the nation's oldest and most prestigious science and math competition"
- Massachusetts Science Engineering Fair: Second Place Award 2020
- Yau Science Award for Computer Science: Bronze Medal 2019

Work History

- Paid Theoretical Computer Science Research Internship at MIT CSAIL 2020, 2022-present
- Private tutor for math (e.g. calculus) / science / programming (e.g. python) 2017-present
- TA for Harvard Math-E 23a/c (Linear Algebra, Real Analysis, Multivariable Calculus) 2019-2020
- Intern as a software engineer at a healthcare AI startup (Beacon Biosignals) 2019-2020

Publications

- William Kuszmaul and Alek Westover. The Variable-Processor Cup Game. In 12th Innovations in *Theoretical Computer Science Conference* (**ITCS**), 2021.
  10.4230/LIPIcs.ITCS.2021.16
- William Kuszmaul and Alek Westover. Brief Announcement: Cache-Efficient Parallel-Partition Algorithms using Exclusive-Read-and-Write Memory. In *32nd ACM Symposium on Parallelism in Algorithms and Architectures* (**SPAA**), 551-553, 2020.
  Paper: arXiv:2004.12532, Code: github.com/awestover/Parallel-Partition, Visualization: parallelpartition.surge.sh/

Skills

- Programming:
  - data science + data wrangling (python: e.g. numpy / julia)
  - full-stack web development (python / javascript)
    I have made lots of video games / multi-user applications
  - High performance code (C++ / julia)
- Algorithms:
  - MIT Advanced Algorithms (Graduate level, 6.5210/18.415)
  - Self studied texts covering standard undergraduate curriculum, e.g. "Algorithms" by Jeff Erickson
- Math:
  - Linear Algebra + Abstract Algebra + Multivariable Calculus
  - Real Analysis + Functional Analysis
  - Complexity Theory