Mihir D. Patel

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Education

University of Oxford   Oct 2025 – Sept 2026
MSc Mathematics and Foundations of Computer Science (expected)

Haverford College   Aug 2021 – May 2025
B.S. Mathematics, B.S. Computer Science, accelerated MSE in CIS at Univ. of Penn. (candidate)
- **Awards**: *Honors in Computer Science, Mathematics Senior Thesis Prize*
- **GPA**: 3.83/4.0 (Mathematics 3.85/4.0, Computer Science 3.83/4.0)
- **Relevant Coursework**: Analysis of Algorithms, Randomized Algorithms (Grad), Theory of Computation, Computational Geometry, Concurrency & Co-Design, Applied Machine Learning (Grad), Probability, Abstract Algebra I, Real Analysis I–II

Experience

Research Assistant, Haverford College   May 2024 – May 2025
- Studied computational problems in social networks, proved hardness results and developed approximation algorithms for balancing the relative importance of two nodes in a graph.
- Produced detailed proof reports and presented findings, work culminated in a preprint in collaboration with researchers at the University of Utah.

Research Assistant, Georgetown University   Jun – Aug 2025
- Investigated parameterized algorithms for the 2-edge-connected spanning subgraph (2ECSS) problem with Dr. Jeremy Fineman's group.
- Analyzed algorithmic approaches, documented intermediate results, and contributed to ongoing research discussions.

Research Assistant, George Washington University   Jun – Jul 2023
- Explored improvements to selection algorithms for finding the kth order statistic under the supervision of Dr. Amrinder Arora.
- Proposed a pivot-selection strategy to reduce the variance of Quickselect, demonstrated improved empirical performance on large datasets, and summarized results in a technical article on Medium.

Teaching Assistant, Haverford & Bryn Mawr Colleges   Aug 2022 – Dec 2023
- Guided students through problem sets and labs in office hours for *Analysis of Algorithms* and *Introduction to Computer Science and Data Structures*.
- Helped design and grade assignments for 20-30 advanced CS students.

Board Member, HaverCode   Jan 2022– Jan 2024
- Organized and led various social events, workshops, and hackathons to build community and support Haverford and Bryn Mawr CS students and faculty.

Skills & Languages

Python, Java, LaTeX, Git, JavaScript, HTML, CSS