

# Megan Le

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## EDUCATION

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| <b>Ph.D. in Computer Science</b><br>Massachusetts Institute of Technology<br><u>Advisors:</u> Bonnie Berger and Heng Li                    | 2023 – present                       |
| <b>M.S. in Computational Science, Engineering, and Mathematics</b><br>University of Texas at Austin<br><u>Advisor:</u> Vagheesh Narasimhan | 2021 – 2023                          |
| <b>B.S. in Computer Science</b><br>University of Texas at Austin   | 2018 – 2022<br><i>High Honors</i>    |
| <b>B.S. in Mathematics</b><br>University of Texas at Austin  | 2018 – 2022<br><i>High Honors</i>    |
| <b>B.A. in English Literature</b><br>University of Texas at Austin   | 2018 – 2022<br><i>Highest Honors</i> |

## RESEARCH EXPERIENCE

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| <b>Bonnie Berger Lab and Heng Li Lab</b> , PhD Student<br>Massachusetts Institute of Technology, Harvard Medical School, and Dana-Farber Cancer Institute<br><u>Advisors:</u> Bonnie Berger, Heng Li, and Victoria Popic (Broad Institute) | Jan 2024 – present  |
| <ul style="list-style-type: none"><li>Working on methods for somatic SV calling and read alignment</li></ul>   |                     |
| <b>Vagheesh Narasimhan Lab</b> , Research Assistant<br>University of Texas at Austin<br><u>Advisors:</u> Vagheesh Narasimhan and Arbel Harpak  | Sep 2020 – Jun 2023 |
| <ul style="list-style-type: none"><li>Used models of admixture to detect signals of natural selection in ancient DNA data</li></ul>  |                     |
| <b>Computational Research in Ice and Ocean Systems Group</b> , Capstone Project<br>University of Texas at Austin<br><u>Advisors:</u> David Halpern (Scripps Institution of Oceanography) and Patrick Heimbach                              | Jan 2021 – May 2022 |
| <ul style="list-style-type: none"><li>Evaluated ECCOv4r4 model currents in the Equatorial Undercurrent</li></ul>   |                     |
| <b>Computational Materials Stream</b> , Research Assistant<br>University of Texas at Austin<br><u>Advisor:</u> Juliana Duncan  | Jan 2019 – May 2020 |
| <ul style="list-style-type: none"><li>Developed software for chemical system simulation with haptic feedback</li><li>Evaluated negative curvature solutions for high-dimensional Newton's Method</li></ul>                                 |                     |

## PREPRINTS / UNDER REVIEW

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- M.K. Le**, O.S. Smith, A. Akbari, A. Harpak, D. Reich, and V. M. Narasimhan. 1,000 ancient genomes uncover 10,000 years of natural selection in Europe. *bioRxiv* (2022). doi: [10.1101/2022.08.24.505188](https://doi.org/10.1101/2022.08.24.505188).

## PUBLICATIONS

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1. D. Halpern, **M.K. Le**, T.A. Smith, and P. Heimbach. Comparison of ADCP and ECCOv4r4 Currents in the Pacific Equatorial Undercurrent. *Journal of Atmospheric and Oceanic Technology*, 40(11), 1369-1381 (2023). doi: [10.1175/JTECH-D-23-0013.1](https://doi.org/10.1175/JTECH-D-23-0013.1)

## CONFERENCE TALKS

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1. **M.K. Le**, O. Smith, A. Akbari, A. Harpak, D. Reich, and V. M. Narasimhan. 1,000 ancient genomes uncover 10,000 years of natural selection in Europe. Platform talk at the American Society of Human Genetics 2022 Annual Meeting; Los Angeles, CA, October 2022.

## INVITED TALKS / SEMINARS

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- “1,000 ancient genomes uncover 10,000 years of natural selection in Europe”
  3. University of Illinois at Urbana-Champaign, Department of Computer Science, March 2023.
  2. Variant Effects Seminar Series, virtual, December 2022.
  1. University of Texas at Austin, RNA & DNA Club Seminar, November 2022.

## POSTERS

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2. A genome-wide scan of time-stratified ancient DNA data to uncover 10,000 years of natural selection in Europe. UT Austin Undergraduate Research Forum; Austin, TX, April 2022.
1. Modifying the Atomistic Machine-learning Package for real-time atomic simulations with DFT accuracy. Texas Advanced Computing Center Symposium for Texas Researchers; Austin, TX, September 2019.

## TEACHING EXPERIENCE

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**Principles of Computer Systems (CS 439)**, Teaching Assistant Jan 2020 – Dec 2021  
University of Texas at Austin, Department of Computer Science  
Instructor: Alison Norman

- Led weekly discussion sections, held office hours, and graded projects and exams

**Computational Materials Stream**, Research Mentor Jan 2020 – May 2021  
University of Texas at Austin, Oden Institute for Computational Engineering and Sciences

- Helped students learn programming, complete labs, and develop individual research projects

**Sanger Learning Center**, Tutor Aug 2019 – Dec 2020  
University of Texas at Austin

- Tutored Data Structures, Probability, Discrete Math, Calculus, and Introductory Programming

**Probability I (M 362K)**, Grader Aug 2019 – Dec 2019  
University of Texas at Austin, Department of Mathematics

## OTHER WORK EXPERIENCE

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**The Federal Reserve Board**, Software Development Intern Jun 2020 – Aug 2020  
Data Modeling Systems Team

- Developed backend speech recognition component for informational chat bot
- Performed unit testing and wrote documentation for data management system

## HONORS AND AWARDS

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| <b>Dean's Honored Graduate</b><br>University of Texas at Austin, College of Natural Sciences  | May 2023           |
| <b>Graduate of Distinction in Service &amp; Leadership</b><br>University of Texas at Austin, College of Natural Sciences                            | May 2023           |
| <b>MIT EECS Great Educators Fellowship</b><br>Massachusetts Institute of Technology, Department of Electrical Engineering and Computer Science      | Feb 2023           |
| <b>Graduate of Distinction in Research</b><br>University of Texas at Austin, College of Natural Sciences  | May 2022, May 2023 |
| <b>NCWIT Collegiate Award Finalist</b><br>National Center for Women & Information Technology  | Dec 2021           |
| <b>Undergraduate Research Fellowship</b><br>University of Texas at Austin, Office of the Vice President for Research                                | Nov 2021           |
| <b>James F. and Bernice M. Hinton Endowed Presidential Scholarship</b><br>University of Texas at Austin   | May 2021           |
| <b>Advanced Summer Research Fellowship</b><br>University of Texas at Austin, Texas Institute for Discovery Education in Science                     | Apr 2021           |
| <b>Eva Stevenson Woods Endowed Presidential Scholarship</b><br>University of Texas at Austin  | May 2020           |
| <b>Second Year Excellence Award</b><br>University of Texas at Austin, College of Natural Sciences   | Mar 2020           |
| <b>Freshman Research Initiative Summer Research Fellowship</b><br>University of Texas at Austin, Texas Institute for Discovery Education in Science | Apr 2019           |

## SERVICE, OUTREACH, AND LEADERSHIP

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### Outreach

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| MIT EECS Graduate Application Assistance Program, Mentor | Fall 2023            |
| UT Austin ACM 4 Change, Committee Member                 | May 2021 - Dec 2022  |
| UT Austin Coding in the Classroom, Mentor                | Oct 2019 - Mar 2020  |
| Hour of Code, Teacher                                    | Dec 2018, 2019, 2022 |

### Other Leadership

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| UT Engineering Chamber Orchestra, Engineering Council Representative | May 2021 – May 2022 |
| UT Engineering Chamber Orchestra, Recruitment Coordinator            | May 2020 – May 2021 |