

# Subhash Kantamneni

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Website: [subhashk.com](https://subhashk.com) Google Scholar: [\[link\]](#) GitHub: [github.com/subhashk01](https://github.com/subhashk01)

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## EDUCATION

### University of California, Berkeley

*Prospective Ph.D. student in Computer Science*

Berkeley, CA

### Massachusetts Institute of Technology

*Masters of Engineering*

August 2024 - June 2025

Advisor: Prof. Max Tegmark

Cambridge, MA

### Massachusetts Institute of Technology

*Bachelor of Science in Computer Science*

August 2020 - June 2024

*Bachelor of Science in Physics*

Cambridge, MA

Graduated with a 5.0/5.0 GPA

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## SELECTED PAPERS

### [Language Models Use Trigonometry to Do Addition](#)

**Subhash Kantamneni** and Max Tegmark

Submitted to International Conference of Machine Learning (ICML) Main Conference 2025.

### [Are Sparse Autoencoders Useful? A Case Study in Sparse Probing](#)

**Subhash Kantamneni**\*, Joshua Engels\*, Senthoran Rajamanoharan, Max Tegmark, and Neel Nanda

Submitted to International Conference of Machine Learning (ICML) Main Conference 2025.

### [How Do Transformers Model Physics? Investigating the Simple Harmonic Oscillator](#)

**Subhash Kantamneni**, Ziming Liu, and Max Tegmark

*Entropy* and ICML 2024 Mechanistic Interpretability Workshop.

### [OptPDE: Discovering Novel Integrable Systems via AI-Human Collaboration](#)

**Subhash Kantamneni**, Ziming Liu, and Max Tegmark

*Physical Review E*.

### [Enhancing Predictive Capabilities in Fusion Burning Plasmas Through Surrogate-Based Optimization in Core Transport Solvers](#)

P. Rodriguez-Fernandez, N.T. Howard, A. Saltzman, **Subhash Kantamneni**, J. Candy, C. Holland, M. Balandat, S. Ament, A.E. White

*Nuclear Fusion*.

### [NuCLR: Nuclear Co-Learned Representations](#)

Ouail Kitouni, Niklas Nolte, Sokratis Trifinopoulos, **Subhash Kantamneni**, and Mike Williams

ICML 2023 SynS and ML Workshop

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## SELECTED HONORS

Fulbright Scholarship Winner (Declined)

2024

Research Science Institute Scholar

2019

National Merit Finalist Scholarship

2019

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## WORK EXPERIENCE

### Bridgewater Associates (Largest Hedge Fund in the World)

Jun – Aug 2023

*Investment Associate Intern (Portfolio Construction)*

Westport, CT

Systematized a geopolitical risk gauge that predicts equity market drops 20Gained deep insights into macroeconomics and dialogued one-on-one with Bridgewater's CEO on recruitment.

**Mobilus Labs****Jun – Aug 2022***Software Engineering Intern**London, UK*

Developed speech transcription for Mobilus's bone-conduction communication headset, a TIME 2021 Top 100 Invention. Created an AI agent that warns users when they enter dangerous construction zones and automates machine checklists.

**NASA Jet Propulsion Laboratory****Jun – Aug 2021***Exoplanet Discovery Group Intern**Pasadena, CA*

Automated verification and validation for the EXCALIBUR exoplanet atmospheric analysis pipeline using ML. Explored classical machine learning and advanced data simulation techniques while writing production-level code.

**TEACHING AND MENTORING EXPERIENCE**

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**Presidential Advisory Cabinet****Aug 2023 – May 2024***Undergraduate Advisor**Cambridge, MA*

Selected as one of four undergraduate advisors to MIT President Sally Kornbluth from a pool of over 50 candidates.

Advised during a tumultuous period in MIT history on issues like food insecurity, academic regulation, and managing a charged campus atmosphere in response to conflict in the Middle East.

**Global Teaching Labs (South Korea, South Africa, Botswana, Bahrain)****Jan 2022/23/24***Teacher**Seoul, Johannesburg, Gaborone, Manama*

Taught global STEM workshops to teenagers from varied socioeconomic classes over significant language barriers.

Codeveloped Arduino projects to introduce programming and engineering projects to illustrate physics concepts.

**Leadership Training Institute****Sep 2020 – Present***Leadership Mentor**Cambridge, MA*

Mentored a group of 15 Boston public school students for 3 months in leadership and public speaking.

Designed weekly leadership exercises that kept students engaged while improving their communicative abilities.