# Raunak Mondal

**BS CS (2025-29), Carnegie Mellon University, School of Computer Science**
858-923-6909, rmondal@andrew.cmu.edu

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## Relevant Courses

- CMU 15-122 Principles of Imperative Computation (Data Structures using C)
- CMU 15-151 Mathematical Foundations for Computer Science.
- CMU 21-241 Matrices and Linear Transformations.
- CMU 15-213 Introduction to Computer Systems
- CMU 15-150 Principles of Functional Programming
- CMU 07-180 Concepts of Artificial Intelligence
- AP Computer Science Principals & AP Computer Science A
- AP Biology, Physics, Chemistry
- Multi-Variable Calculus

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**Skills:** C, Python, Java, HTML/JS, Debugging tools, AI/ML libraries PyTorch, NumPy, TensorFlow, LLM models.

## Honors/Awards

- Math research at Stanford University Math Camp (SUMac), 2024.
- 2023 ARML math competition: Placed in top 50 nationally.
- National Merit finalist, 2024-2025
- Coca-Cola Scholar Semifinalist 2024-2025
- 2nd place award in Southern California Science Olympiad, 2023 at Caltech.
- Placed 21st in the Harvard-MIT Mathematics Tournament (HMMT) Guts Round.

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## Publications

- Are Robots Ready to Deliver Autism Inclusion, Association of Computing Machinery CHI 2024 (co-author)
- Which sequence based neural network architecture yields optimal performance in classification of autism-related behavior, AMIA 2024. (1st Author)

## Research Experience

**Student Researcher, University of Hawaii, Manoa, Hawaii Digital Health Lab**

- Built a mechanism to detect autism through behavioral videos of children using LSTM (long short-term memory) network-based machine learning model.

- 1st author of the research paper, accepted to a reputed Bioinformatics conference (American Medical Informatics Association, 2024).

**Research Intern, department of computer science, UCSD**

- Created a dataset to analyze ableism in research & social media.
- Implemented a mechanism to detect ableist text in social media using LLM and prompt engineering.
- Co-author of the paper "Are Robots ready to deliver Autism inclusion" – Association of Computing Machinery. CHI 2024.

**Student Researcher, UCSD MRSEC, Research Immersion in Materials Science and Engineering**

- Presented a project that synthesized Li-ion battery anodes at UCSD Student Research Conference
- Used machine learning and data science concepts to find out the optimal APF (Atomic Packing Factor) of various materials.
- Worked on the Magnetic Self-Assembly Simulation project where I created a computational model to predict molecular properties that are displayed on a website.

**CureScience Scholars Bioinformatics and Machine-Learning Program, University of California San Diego**

- Analyzed the possible genetic causes of autism and other neurological disorders using bioinformatic tools, presented it at the symposium.

## Work Experience

1. **ScottyLabs, CMU**

   Lead developer for my team in ScottyLabs, where I was able to delegate tasks to 10 other team members to create a website for the GSA Student Housing project, which aims to allow CMU students to find extensive information about off-campus listings.

2. **Prof. Victoria Castillo, Department of Psychiatry & Behavioral Health, Ohio State University & UCSD:**

   Assessed the impact of structural racism on neurocognition as part of a research project funded by the National Institute of Health.