

Aakash Gurung

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github.com/GrgAakash

SKILLS

Python, Julia, Matlab, PowerQuery, JavaScript, CSS, HTML.

HONORS AND AWARDS

CUNY Undergrad Research Day 2024, Awarded best poster out of 200+.
USA Astronomy and Astrophysics Competition 2021, National Round Qualifier.
Nepal Mathematics Olympiad 2020, finalist.
IOAA 2020 qualifier after obtaining Rank 1 in Nepal Astronomy Olympiad.

EDUCATION

The University of Alabama

BS+MA, Mathematics

May 2027

Tuscaloosa, AL

Juniata College

Mathematics and Computer Science

May 2023

Huntingdon, PA

- Samuel J. Steinberger, Jr. Memorial Award

EXPERIENCE

Student Technology Assistant

Student Center, University of Alabama

January 2024 – Present

Tuscaloosa, AL

- Assist with technology related issues for events associated with the Student Center.

Peer Tutor

Mathematics Technology Learning Center

October 2024 – Present

Tuscaloosa, AL

- Drop in tutor for Calculus 1,2 and 3. Assisted in tutoring recitation classes for Calculus 1.

Content Department and Outreach Department Head

Mathematics Initiatives in Nepal

August 2020 – April 2022

Remote

- Led and tutored sessions in Algebra and Combinatorics; helped organize camps in 2021 and 2022, assisted in 2024.

Junior Member and Outreach Coordinator

Nepal Astronomical Society

November 2020 – July 2022

Kathmandu, Bagmati

- Organized the 2022 National Astronomy Olympiad and taught classes on Practical Astronomy and the Nature of Light.
- Conducted hands-on sessions in 16+ schools on telescope use, night sky navigation, sundial making, and basic astrophysics.

RESEARCH AND CONFERENCES

- (May 2025- July 2025) As part of a Summer 2025 REU research team, we (5 members) analyzed "finite size effects" in epidemic modeling by co-developing an agent-based stochastic model. We studied the stochastic behavior of disease spread, compared it with its deterministic ODE counterpart, and conducted case studies based on COVID-19.

Mentors: Professor Chuntian Wang, Professor Yuanzhen Shao, Professor Yuanyuan Song

- (Feb 2025- present) Exploring combinatorial proofs of Q,T Catalan numbers while also exploring its algebraic structure under the guidance of Professor Kyungyong Lee.
- (Feb 2024- June 2024) Aakash Gurung, "Game of Cycles on Maximal Plane Graphs." Presented at CUNY Undergraduate Research Day 2024 and MathFest 2024.

PUBLICATIONS

- Aakash Gurung and Cheng-Han Pan, Continued Fractions, a-Fibonacci numbers, and the middle b-noise, Mathematics Exchange 18 (2024), no. 1, 77–87, <https://doi.org/10.33043/r6a225bc>.
- PolyMath Jr under Dr. Victor H. Moll. The integrals in Gradshteyn and Ryzhik. Part 34: Bessel functions. Published in Scientia Series A: Mathematical Sciences, Volume 34, March 19, 2024. Presented at JMM 2024.