Avinash lyer

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ABOUT ME Aspiring mathematics PhD student.

EDUCATION Bachelor of Arts in Mathematics May 2025 (Expected)

GPA: 3.93

Occidental College, Los Angeles, CA

RELEVANT Completed Courses: Linear Algebra, Abstract Algebra, Topology, Graph Theory, Real Analysis, Real Analysis II (Metric Spaces and Measure The-

Theory, Real Analysis, Real Analysis II (Metric Spaces and Measure Theory), Algebra II (Ring Theory, Field Theory, and Galois Theory), Complex Analysis, Ordinary Differential Equations, Set Theory and Foundations of Mathematics, Mathematical Methods in Physics, Advanced Linear Algebra.

Planned Courses (Spring 2025): Partial Differential Equations, Mathematical Methods in Physics II, Amenability and C^* -Algebras (Honors Thesis Independent Study), Data Structures.

PROJECTS AND PAPERS

Research Experience for Undergraduates: NSF-REU at Texas A&M-Commerce, member of the Complex Analysis research group under Dr. Mehmet Celik, studying excess area identities under operators on particular function spaces. Publication forthcoming.

Power BI Full Floor Dashboard: project during internship at Onto Innovation, using Power Queries to harmonize different tool families' information, and used Synoptic Panel to visualize data.

Personal Website: used GitHub Pages and Jekyll to create a website for a portfolio in college.

AWARDS AND Dean's List Fall 2021–Spring 2024
HONORS President's Scholarship Fall 2021–Present

William Lowell Putnam Exam 1/120, 8/120

Work Experience

Section Editor
The Occidental

September 2023-Present

- Worked with senior team, co-editors, and writers to ensure high-quality opinion articles.
- Managed demanding weekly schedule while full-time student in upper division math and economics courses.
- Ensured all articles were harmonized with AP Style.

Staff Writer

January 2022-Present

The Occidental

- Authored over 20 articles, including reported stories and opinions.
- Interviewed at least 3 sources per reported story, met demanding weekly schedule.
- Worked with editors to ensure high-quality story.

Data Analytics Intern

May 2023-August 2023

Onto Innovation, Milpitas, CA

- Worked on process development within Metrology Business Unit.
- Improved Power Automate workflows for process improvements across 3 product families.
- Integrated data sources from manufacturing plans and floor information to create Power BI reports that provided at-a-glance understanding of state of manufacturing.

Grader

September 2022-May 2023

Mathematics and Economics Departments, Occidental College

- Provided extensive feedback for student assignments in Intermediate Microeconomics and Calculus I.
- Maintained standards and deadlines alongside demanding class schedule and work for the newspaper.

SPECIALIZED SKILLS

Languages: Proficient in LATEX

Enterprise Software: Microsoft Office and Microsoft Power Platform

Spatial Thinking and Reasoning Mathematics and Computation