

# Evan Leach

Candidate for B.A. in Mathematics of Computation and M.A. in  
Pure Mathematics at UCLA, graduating June 2026

## Academics

4.0 major GPA, 3.99 overall GPA. Coursework:

- Graduate real analysis (3 course series)
- Graduate complex analysis
- Graduate functional analysis
- Honors real analysis (2 course series)
- Honors linear algebra (2 course series)
- Honors numerical analysis (2 course series)
- Honors algebra (2 course series)
- Differential geometry
- Graph theory
- Set theory
- Graduate communication complexity
- Algorithms
- Theory of computing

### Departmental scholars program (2024-2025):

Simultaneous bachelor's and master's degree program. Passed UCLA's Basic Qualifying Exam for graduate students in mathematics.

### Directed reading program (2024):

Presented current research techniques from Larry Guth's "Polynomial Methods in Combinatorics."

### Student grader (2024-2025):

Graded honors linear algebra homework at UCLA for three quarters.

## Work experience

### Altruist (Summer 2025):

Software engineering intern. Created an AI agent from scratch for automating API regression tests, now used to save QA team 50 hours per week.

## Research experience

### Directed research (2025):

Working with Professor Anton Bernshteyn in a directed research course on connections between descriptive set theory and circuit complexity, developing new proofs of complexity results and Ramsey-like properties in countable circuits, and constructing finitized analogues for polynomial-size circuits.

- [Link](#) to final report

### Independent work (2025):

- State complexity of deterministic finite automata for tagged unions ([link](#))
- The nonexistence of time-optimal Turing machines with leading coefficients ([link](#))

## Projects

### Metric spaces website (2025):

Developed an [interactive website](#) which teaches the metric space curriculum through the equivalence of compactness with completeness and total boundedness. Ranked in the top 2% of entries to the 4th Summer of Math Exposition contest.

### Original analysis problems (2024-2025):

Wrote 47 [original analysis problems](#) covering the standard undergraduate curriculum.

### YouTube channel (2024-2025):

Created YouTube videos with over 30,000 views explaining several proofs of the [first](#) and [second](#) fundamental theorems of calculus.