

DAVID J. SHUSTER

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EDUCATION

Amherst College, Amherst, MA

June 2021

B.A. in Mathematics & Religion, with distinction

- GPA: 4.0
- Honors: Phi Beta Kappa
- Peer Tutor Fellow for Linear Algebra; Groups, Rings and Fields; Introduction to Analysis; and Mathematical Logic
- Relevant coursework: Mathematical Logic; Game Theory; Topology
- Activities: Board Games Club President; Philosophy Club Treasurer; Glee Club & A Cappella Member

RESEARCH EXPERIENCE

Rochester Institute of Technology, Rochester, NY

June 2019 – July 2019

Researcher (NSF REU)

- Discovered and proved a number of results in graph labeling (about rank numbers of Cartesian products $(K_s - e) \times P_n$); presented findings to research cohort weekly.
- Was selected for and delivered presentation (“Large Rank Numbers & $(K_s - e) \times P_n$ ”) at the 2020 Joint Mathematics Meetings in Denver, CO.

TEACHING EXPERIENCE

Trinity Classical School, Bellingham, WA

Aug 2021 – Present

Upper School Math Teacher

- Creating lesson plans, designing curriculum, writing exams, and leading lessons for Pre-Algebra, Algebra I, Geometry, Algebra II (2021-2022), Pre-Calculus, and Calculus, the last three of which are new courses at the school.
- Writing weekly adventure-themed riddles which draw on a range of mathematical topics, including graph theory, game theory, cryptography, and formal logic.

MathPath, Skillman, NJ

June – July of 2021 & 2022

Counselor

- Assisted class instructors by facilitating class and office hours discussions for mathematically gifted students (ages 11-14); courses were week-long mini-courses on topics such as quantum logic, introductory knot theory, and history of trigonometry.
- Organized mathematical scavenger hunts, games, and other activities for about 100

students.

- Wrote letters and assisted others in writing letters about student performance, both academic and behavioral.

Freelance & other

- Taught, tutored, and mentored students in a variety of topics and programs (Yang Yang Education Center, Reader to Reader, and freelance)
- After high school, interned at a non-profit organization that gathers and analyzes government spending data; edited drafts, gathered data, conducted basic analyses which contributed to leading articles on news websites such as the Wall Street Journal, Washington Post, and Forbes. I have also apprenticed with a general contractor and interned with a leasing agent.

LANGUAGES

- Programming Languages: proficient in Java, Python, & LaTeX software; novice in R & C++
 - With two other students, created a musical keyboard Java program featuring instrument choice, as well as song loading and playback capability ([Click here for more info.](#))
 - Created a Python tool that calculates Banzhaf Indices, a metric used to quantify power distribution in certain voting systems; the program also compares these results to the party list's fraction of the popular vote ([Click here for more info.](#))
- Foreign Languages: Mandarin Chinese (advanced), German (intermediate)