

Christian Lentz

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[Personal Website](#) | christianlentz234@gmail.com | [LinkedIn](#)

Education

Macalester College | St. Paul, Minnesota | 09/2020 - 05/2024

- Bachelors of Arts in Mathematics and Computer Science
- Overall GPA: 3.96
- Summa Cum Laude
- Honors Thesis: [Persistent Relative Homology for Topological Data Analysis](#)
- Advisors: Lori Ziegelmeier, Susan Fox

Oxford University | Oxford, England, United Kingdom | 01/2023 - 06/2023

- Visiting Student at St. Catherine's College, Mathematics
- Relevant Coursework: Real Analysis, Groups and Group Actions, Number Theory

University of Wisconsin | Madison, Wisconsin | 06/2022 - 08/2022

- Visiting Student, Mathematics
- Relevant Coursework: Ordinary Differential Equations, Combinatorics

Relevant Experience

QA Engineering Intern | 06/2022 - 01/2023

Maverick Software Consulting - Minneapolis, MN

- Contracted with TravelNet Solutions of Cottage Grove, MN.
- Supervisor: Tracy Olhausen (tracyolnhausen@gmail.com), Senior Director of Quality.
- Manual and automated software testing with two development teams: API and Finance.
- Reproduction and documentation of bugs in production code.
- Contributed to automated test framework using JavaScript, Playwright, CSS.
- Experience with agile development / scrum teams.
- Frequent participation with code review and GitHub issue management.

Teaching Assistant | 01/2022 - 05/2024

Macalester College MSCS Department - St. Paul, MN

- Attended lectures, held office hours, graded submitted code, proofs and problem sets.
- Courses: Linear Algebra, Statistical Modeling, Computational Geometry, Algorithms.

Undergraduate Research Assistant | 05/2023 - 07/2023

University of Minnesota - Minneapolis, MN

- Advisors: Lori Ziegelmeier (lziegell@macalester.edu), Macalester College and Greg Henselman-Petrusek (gregory.roek@pnnl.gov), Pacific Northwest National Laboratory.
- Research in Algebraic and Computational Topology.
- In progress contribution to open-source project [Open Applied Topology](#) with Rust programming language.

Service Experience

Food Server | 07/2021 - 07/2024 | Crossover Cantina & Eatery | Waterford, WI

Leonard Center Building Supervisor | 02/2022 - 05/2024 | Macalester College | St. Paul, MN

Clicklist Clerk | 03/2020 - 08/2020 | Kroger | Mount Pleasant, WI

Restaurant Busser | 06/2019 - 03/2020 | Olive Garden | Racine, WI

Utility Clerk/Cashier | 04/2018 - 11/2019 | Kroger | Mount Pleasant, WI

Talks and Presentations

A Computational Approach for Persistent Relative Homology

- 2023 Fall Meeting of the Mathematical Association of America, North Central Section, University of Minnesota-Duluth, September 2023
- Macalester College Summer Showcase, St. Paul, MN, October 2023
- AIM-AMS Special Session on Applied Topology Beyond Persistence Diagrams, 2024 Joint Mathematics Meetings, San Francisco, CA, January 2024
- PME Undergraduate Student Poster Session, 2024 Joint Mathematics Meetings, San Francisco, CA, January 2024

Persistent Relative Homology for Topological Data Analysis

- Undergraduate Honors Defense, Macalester College Department of Mathematics, Statistics and Computer Science, St. Paul, MN, April 2024

Awards and Honors

Konhauser Achievement Award for Mathematics, Macalester College, 2024

Relevant Skills

Languages: Python, Java, JavaScript, R, Rust, C

Technologies: JUnit, HTML, CSS, Node.js, npm, Postman API, VS Code, Google Firebase, Playwright, GitHub, Jira, Mathematica, NumPy, SciPy, matplotlib, RStudio, dplyr, tidyr, ggplot2

General: Customer Service, Teaching, Google Workspace