Christian Lentz

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Education

Macalester College — St. Paul, MN
BA, Mathematics and Computer Science — 09/2020 - 05/2024

- Cumulative GPA: 3.96 / 4.0
- Summa Cum Laude
- Honors Thesis: *Persistent Relative Homology for Topological Data Analysis*

Oxford University — Oxford, England, UK
Visiting Student, Mathematics — 01/2023 - 06/2023

University of Wisconsin — Madison, WI
Visiting Student, Mathematics — 06/2022 - 08/2022

Experience

Maverick Software Consulting — Minneapolis, MN
QA Software Engineer, Internship — 06/2022 - 01/2023

- Contracted with TravelNet Solutions of Cottage Grove, MN.
- Reference: Tracy Olhausen, Senior Director of Quality Assurance.
- Manual / regression testing and test case documentation for frontend and backend.
- Contributed to automated test framework using JavaScript, Playwright, CSS.
- Experience with agile / scrum methodologies.
- Frequent participation with code review and GitHub issue management.

Macalester College — St. Paul, MN
Teaching Assistant — 01/2022 - 05/2024

- Courses: Linear Algebra, Statistical Modeling, Computational Geometry, Algorithms.

University of Minnesota — Minneapolis, MN
Research Assistant — 05/2023 - 07/2023

- Research in Algebraic and Computational Topology, project advised by Lori Ziegelmeier (Macalester Col.) and Greg Henselman-Petrusek (PNNL).
- In progress contribution to open-source software Open Applied Topology

Skills

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

Front End | HTML, CSS

Backend | Node.js, Google Firebase

Miscellaneous | VS Code, Git/GitHub, Jira, Mathematica

Data Science | NumPy, SciPy, matplotlib, RStudio, dplyr, tidyr, ggplot

General | customer service, teaching, presentation, agile/scrum, technical & academic writing, literature review

Talks & Presentations

A Computational Approach for Persistent Relative Homology

- 2023 Fall Meeting of the Mathematical Association of America NCS**,** 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 & Honors

Konhauser Achievement Award, Mathematics
Macalester College, 2024
For outstanding academic record and demonstrated dedication to and interest in the field.

Courses

Object Oriented Programming	Data Structures
Algorithm Design & Analysis	Theory of Computation
Introduction to AI	Computer Systems
Software Development	Discrete Mathematics
Combinatorics	Probability
Ordinary Differential Equations	Statistical Modeling
Mathematical Modeling	Multivariable Calculus
Computational Linear Algebra	Real Analysis
Complex Analysis	