Christian Lentz

Brookline, MA | (262) 488-2205
Portfolio | christianlentz234@gmail.com | LinkedIn

Skills

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

Front End Dev | HTML, CSS

Backend Dev | Node.js, Google Firebase

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

ML & Data Science | NumPy, SciPy, PyTorch, matplotlib, RStudio, Tidyverse, numerical & ML algorithms

General | results-driven, team-oriented, agile/scrum, literature review, technical & academic writing, project management, customer service

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 features.
- Contributed to automated test suite 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

- Attended lectures and held office hours weekly.
- Graded students' work including code, proofs and problem sets.
- Courses: Linear Algebra, Statistical Modeling, Computational Geometry, Algorithms.

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

- Algebraic and computational topology, homological and sparse matrix algebra. Project advised by Lori Ziegelmeier (Macalester Col.) and Greg Henselman-Petrusek (PNNL).

Awards

Konhauser Achievement Award Macalester College, 2024

- Awarded to juniors or seniors majoring in mathematics or computer science at Macalester College.
- For outstanding academic record and demonstrated dedication to and interest in the field.

Wallace Distinguished Scholarship Macalester College, 2020

- Based on academic merit and awarded on a highly-competitive basis.

Education

Macalester College St. Paul, MN
BA, Mathematics & Computer Science 05/2024

- Summa Cum Laude
- Honors Thesis: *Persistent Relative Homology for Topological Data Analysis*

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

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

Courses

Principle of OOP	Data Structures
Algorithm Design/Analysis	Computer Systems
Theory of Computation	Introduction to AI
Software Development	Discrete Mathematics
Combinatorics	Statistical Modeling
Mathematical Modeling	Multivariable Calculus
Probability	Numerical Analysis
Real Analysis	Complex Analysis
Ordinary Differential Equations	

Talks & Presentations

Contributed Talks

2024 January: Joint Mathematics Meetings, AIM-AMS Special Session on Applied Topology Beyond Persistence Diagrams, *A computational approach for persistent relative homology.*

2023 September: Fall Meeting of Mathematical Association of America NCS, *A matrix factorization algorithm for persistent relative homology.*

Poster Presentations

2024 January: Joint Mathematics Meetings, PME Undergraduate Student Poster Session, *A computational approach for persistent relative homology.*

2023 October: Macalester College, Summer Showcase Seminar, *A matrix factorization algorithm for persistent relative homology.*

Miscellaneous

2024 April: Undergraduate honors defense, Macalester College, Department of Mathematics, Statistics and Computer Science, *Persistent relative homology for topological data analysis.*