

Ethan Scheelk

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EDUCATION

Macalester College

Bachelor of Arts in Computer Science

Bachelor of Arts in Mathematics

Minor in Physics

Saint Paul, MN

Aug. 2020 – May 2024

3.94 GPA, Summa Cum Laude

TECHNICAL SKILLS

Languages: C, C++, Chapel, Rust, Python, R, Java

Developer Tools & Technologies: Git, Linux, Cargo, Command-Line Tools, Bash Scripting, OpenMP, OpenACC

Frameworks: Nvidia HPC SDK, Unity, Godot

Interests: Early Modern English Literature, Poetry, Photography, Biking

EXPERIENCE

Mathematics Research Assistant

Macalester College

May 2024 – Present

Saint Paul, MN

- Contributed to development of Rust crate OAT (Open Applied Topology) performing Topological Data Analysis
- Collaborated and communicated with other student researchers, principal investigators, and lead developer on problems and desires
- Improved stability of cycle optimization and investigated methods to save high-cost data results

Computer Systems Teacher Assistant

Macalester College Math, Stat, & Computer Science Department

Jan. 2023 – May 2024

Saint Paul, MN

- Attend class periods, assist students with activities, homework, or any other questions
- Schedule and host office hours weekly to ensure student success
- Grade homework assignments and host study sessions for exams

Public Observatory Night Host

Macalester College Physics Department

Sep. – Dec. 2022

Saint Paul, MN

- Organized weekly open house events for the Macalester Observatory
- Managed outreach on social media and campus newsletter
- Operated and demonstrated advanced scientific equipment for guests

PROJECTS

Parallel Boids | *C/C++, OpenMP, OpenACC, Nvidia HPC SDK, Bash*

Nov. 2023 – Feb. 2024

- Parallelized flocking boids algorithm on CPU and GPU
- Studied speedup of parallelization with Bash scripts, results presented in technical report
- Refactored implementation for C++ OpenGL for visual analysis
- Presented to general audience, winner of department Capstone Award
- Adapted project as a Peachy Parallel Assignment for future parallel programming students – short paper and presented by Professor Elizabeth Shoop May 27, 2024

Retuna: Modernized Eartraining for Everyone | *Godot, Jira, Version Control, Teamwork*

Sep. - Dec. 2023

- Collaborated as a team to produce eartraining game in Godot
- Planned project timeline and identified minimum viable product within a group setting
- Brainstormed program structure and refactored when needed
- Published game on itch.io and ensured compatibility with alternative input methods