

Oliver A. Calder

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EDUCATION

B.A., Carleton College

2022

Distinction in Mathematics, Computer Science

Northfield, MN

Cum Laude, GPA: 3.85

RESEARCH EXPERIENCE

Senior Thesis, Mathematics

September 2021 – March 2022

Carleton College

Northfield, MN

Detecting Gerrymandering in Redistricting Plans

<https://github.com/olivercalder/gerrymanderingComps>

With Eva Airoidi, Antonia Ritter, Tom Patterson, and Bekka Stein

Deanna Haunsperger, Advisor

Senior Thesis, Computer Science

September 2021 – March 2022

Carleton College

Northfield, MN

Replicating Security Attacks

<https://github.com/olivercalder/dht-crawler>

With Peter McCrea

Jeff Ondich, Advisor

Exploratory Operating Systems

June – September 2020, December 2021

Carleton College

Northfield, MN

github.com/olivercalder/rust-kernel

github.com/olivercalder/kernel-benchmark

Aaron W. Bauer, Supervisor

Sonic Signatures

June 2019 – June 2020

Carleton College

Northfield, MN

github.com/olivercalder/sonic-signatures

github.com/olivercalder/character-text-pipeline

Eric Alexander, Supervisor

WORK EXPERIENCE

Firmware Engineer

July 2022 – Present

Seagate Technology

Shakopee, MN

Software Engineering Intern

June – August 2021

Hewlett Packard Enterprise (Cray HPC)

Bloomington, MN

- Built and released software security updates for the Cray XCCS line of supercomputers.
- Wrote scripts to identify unpatched security vulnerabilities and create reports to allow the team to respond more quickly to customer needs.

Data Research Assistant

December 2019 – January 2020

*Minnetronix, Inc.**St. Paul, MN*

- Wrote automation scripts to speed up the processes of data, file, and spreadsheet management and verification.
- Tools I created have helped the Minnetronix Neuro team to ramp up the volume of data they can accept and allocate, enabling a shift towards big-data analysis for machine learning.

Computer Science Teaching Assistant and Grader September 2019 – June 2022*Carleton College**Northfield, MN*

- I work with and mentor students, communicating new concepts in a way which builds on their current understanding and reinforces the underlying logic behind computer hardware and software.
- I also guide students through debugging their own code, and encourage efficient and consistent solutions to problems.
- See below for course information.

TEACHING EXPERIENCE**TA: CS 111 Intro to Computer Science**

W'21

*Computer Science Department, Carleton College**Northfield, MN***TA: CS 201 Data Structures**

F'19, W'20

*Computer Science Department, Carleton College**Northfield, MN***TA: CS 208 Intro to Computer Systems**

S'20, F'20, S'21, F'21, S'22

*Computer Science Department, Carleton College**Northfield, MN***Grader: CS 358 Quantum Computing**

W'22

*Computer Science Department, Carleton College**Northfield, MN*

AWARDS AND FUNDING**David Pollatsek '96 Prize in Computer Science**

2022

*Carleton College**Northfield, MN***Distinction in Mathematics**

2022

*Carleton College**Northfield, MN***Sigma Xi**

2022

*Carleton College**Northfield, MN***Towsley Endowment Research Scholarship**

2019, 2021

*Carleton College**Northfield, MN***Exemplary Rating, Writing Portfolio**

2020

*Carleton College**Northfield, MN*

VOLUNTEERING**Director, Pied Pipers (Chamber Orchestra)**

Fall 2021 – Spring 2022

*Carleton College**Northfield, MN***IT Engineer, KRLX 88.1 FM**

Spring 2019 – Winter 2022

*Carleton College**Northfield, MN*

SKILLS

Languages

- **Expert:** C, Python
- **Skilled:** bash/POSIX shell, Java, Rust, Scheme
- **Familiar:** Go, JavaScript, SQL, x86 assembly

Linux

- 4+ years full-time use
- Worked on security releases based on SLES
- Professional workstation and server administration
- In-depth experience with installation, package management, backup and recovery, ssh and remote management, container administration, networking and firewalls, web servers and proxies, databases, filesystem management

Experience

- Automation, communication, computational mathematics, concurrency, data visualization, databases, filesystems, gdb, git, high-performance computing, Jenkins, LaTeX, machine learning, OpenGL, optimization, OS kernel development, parallel computing, systems administration, technical writing, vim, virtualization, unikernels

RELEVANT COURSEWORK

- AI (CS 321)
- Abstract Algebra (MATH 342)
- Algorithms (CS 252)
- Advanced Algorithms (CS 352)
- Combinatorial Theory (MATH 333)
- Computability and Complexity (CS 254)
- Computational Mathematics (MATH 271)
- Computer Systems (CS 208)
- Computer Graphics (CS 311)
- Data Structures (CS 201)
- Generative Approaches to Syntax (LING 216)
- Linear Algebra (MATH 232)
- Mathematical Structures (MATH 236)
- Multivariable Calculus (MATH 211)
- Operating Systems (CS 332)
- Ordinary Differential Equations (MATH 241)
- Probability (MATH 240)
- Programming Languages (CS 251)
- Quantum Computing (CS 258)
- Software Design (CS 257)