

Kimberly McKinnon

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EDUCATION

University of Utah

PhD, Computer Science Program

Current

Advised by Dr. Mary Hall

Salt Lake City, UT

- Social Events Coordinator for Grad CS Women, Member of Graduate Student Associate Council

Research Interests

- High performance computing, compilers, scientific computing, deep learning, algorithms and theory

Brigham Young University

Apr. 2025

Bachelor of Computer Science

Provo, UT

Minor in Mathematics

- GPA 3.72
- Recipient of Heritage Scholarship, celebrating intellect and cultural heritage
- WISTEM Council Member, Member of Women in Computer Science Club and Phi Eta Sigma Honor Society

Relevant Coursework

- Coding Courses: Deep Learning (CS 474), Systems Programming (CS 324), Software Design (340), Concepts of Programming Languages (CS 330)
- Math Courses: Cryptology (Math 485), Fundamentals of Mathematics (Math 290), Multivariable Calculus (Math 314)

SKILLS

- Coding Languages: Python (advanced; pandas, numpy, pytorch), C/C++ (advanced), JavaScript/TypeScript (intermediate), Java (intermediate), Makefiles (intermediate), HTML (intermediate), Bash (proficient), Racket (proficient)
- Concepts and Tools: Parallel and distributed programming, slurm clusters, algorithms, data structures, machine and deep learning, parsing, monads, web development, Linux terminal commands, git
- Speaks Norwegian with conversational fluency

EXPERIENCE

Brigham Young University

Provo, UT

Research Assistant

Sept. 2024 – April 2025

- Implemented Fixed Point Parsing, a small, flexible, and intuitive parsing framework
- Explored the effects of partial evaluation on parser design to improve runtime performance
- Studied functional programming concepts, such as monads
- Presented research at the Student Research Conference alongside 3 lab members

Teaching Assistant for CS 236 Discrete Structures

Jan. – April 2023

- Taught students concepts including grammars, parsing, proof techniques, sets, relations, relational data models; graphs and graph algorithms; debugging
- Graded Assignments

Resident Assistant for Student Housing

Aug. 2020 – April 2021

- Built community through weekly activities and time with 40 residents
- Guided residents to campus resources for their academic, mental, and physical well-being

Pacific Northwest National Laboratory (PNNL)**Richland, WA***Tech Student*

April – Aug. 2024

- Worked on Aggregate Memory for Streaming Decision Trees (parallelize the tree, test accuracy, tested different optimization methods)
- Installed and learned to use SST Network Simulation to advise others
- Created and used a methodology for profiling events and measuring accuracy with minimal memory
- Hyper-parameter fine tuning with Optuna
- Presented Research at IEEE WIE International Leadership Summit Poster session

Tech Student

Jun. 2023 – Jan. 2024

- Explored increased memory potential in new computer systems using Streaming Decision Tree in C++
- Utilized git source control to document and preserve code in a shared environment
- Worked in a hybrid environment with team members, providing relevant status updates
- Used SSH (secure shell) to access HPC and other remote systems
- Collaborated with other professionals to incorporate their research into the code

Science Student

Jun. 2018–Nov. 2021

- Collected high performance computer benchmarks for a report
- Analyzed performance of graphic processing units (GPUs) vs. central processing units (CPUs) on HPCs to create roofline models
- Organized and transcribed data for Nuclear Non-Proliferation efforts to track elements and processes

OUTREACH AND VOLUNTEERING**Academic Advisor for CS Office of Belonging**

Nov. 2024 – April 2025

Brigham Young University

Provo, UT

- Wrote two handbooks for onboarding new advisors
- Recruited and trained 4 new academic advisors
- Met with students individually for advice on creating class schedules and emotional support
- Started a new program to expand the office's reach and enhance student engagement

WISTEM Council Member (Women in STEM)

Sept. 2024 – April 2025

Brigham Young University

Provo, UT

- Planned New Student Fair and Winter Workshop to support women in STEM

The Church of Jesus Christ of Latter-Day Saints

Nov. 2021 – Jun. 2023

Full-time Volunteer Representative

Oslo, Norway

- Responsible for the training and wellbeing of 20 adults aged 18–22 in a foreign country
- Co-organized and presented at conferences every other month
- Content creator for two Norwegian Facebook pages (9.9K followers) to convey values to viewers; used Canva Design and Meta Business suite to publish 3–5 posts weekly

FIRST (For Inspiration and Recognition of Science and Technology) Program

Sept. 2014 – Dec. 2020

Mentor, Club President

Richland, WA

- Taught technical and leadership skills to local robotics teams while a member, and later as an Alumni
- Empowered young students, especially girls, to pursue their interests in STEM
- Captained and held other leadership positions on the team; won state competitions
- 2023 onwards, volunteer as a game referee at state competitions