

Technical Skills

Languages: JavaScript, Java, C, HTML, CSS, SQL.

Technologies and Tools: Git, Node.js, Bash, Linux systems, React, Jupyter notebooks, Docker.

Relevant Experience

Peer Tutor | Lewis & Clark College — Portland, OR **September 2019 – May 2022**

- Tutored students in computer science, math, and physics.
- Broke down complex problems into achievable and familiar steps.
- Reviewed course material, clarified concepts, and guided test preparation.

Summer Research Intern | Lewis & Clark College — Portland, OR (remote) **May – July 2021**

- Researched secure computing system development through formal verification.
- Designed a high-level component architecture and encrypted communication protocol for a proof-of-concept networked thermometer device.
- Prototyped multithreaded prime number generator on seL4 microkernel.

Software Engineering Intern | NCAR Earth Observing Laboratory — Boulder, CO (remote) **May – July 2020**

- Developed a web interface using React and Highcharts to display diagnostic information so scientists can easily monitor their data acquisition systems, automatically analyzing the data to highlight potential concerns.
- Wrote unit tests to ensure correct behavior and prevent bugs.
- Automated building, testing, and deployment workflows with GitHub Actions and Ansible.
- Incorporated user feedback to improve data presentation and user experience.

Web Development Intern | Field Day — Los Angeles, CA (remote) **May – August 2019**

- Updated interfaces and modernized date picker component in customer-facing React marketing dashboard.

Activities and Projects

Virtual Fax Machine | github.com/linusbrogan/fax-machine **February 2023**

- Created a responsive web app to easily send faxes on Cloudflare's serverless platform, using the Telnix fax API.

Raytracer | github.com/linusbrogan/graphics **May 2022**

- Developed a 3D rendering program in C, which supports various objects with realistic lighting.

Club Leader | Lewis & Clark ACM Student Chapter **May 2019 – May 2022**

- Organized events, including talks and hackathons, for Lewis & Clark's Association for Computing Machinery Student Chapter, increasing engagement with the Computer Science department.

Pacific Rim Collegiate Cyber Defense Competition **April 2020, March 2021**

- Configured Linux servers for security and reliability.
- Led Lewis & Clark's 2021 team, mentoring team members in defensive system administration skills.

National Cyber League **October 2020**

- Ranked in the top 10% nationally across a range of cybersecurity skills.

Tetris | github.com/linusbrogan/tetris **December 2019**

- Implemented the classic game Tetris in Java with a team of several students.

Onion Forecast | github.com/linusbrogan/bonion **December 2018**

- Built a website using Node.js and Docker to give a daily onion "weather forecast" for meals in Lewis & Clark's dining hall by analyzing meal data from its API.
- Won second place in a Lewis & Clark hackathon.

Education

Lewis & Clark College — Portland, OR **September 2018 - May 2022**

- Bachelor of Arts, Computer Science and Mathematics, minor in Physics.
- Honors: *summa cum laude* (GPA: 3.99), Sigma Pi Sigma (national physics honor society).
- Scholarships: Neely Merit Scholarship, Templeton National Merit Scholarship.