Luke Erling Fredrickson

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EDUCATION

University of Vermont   *Degree Expected May 2022*

Bachelor of Science, Computer Science // Statistic Minor // Deans List: Fall 2018 — Fall 2021   GPA: 3.96

WORK EXPERIENCE

Undergraduate Research Assistant, *Univesity of Vermont*   *June 2020 — Dec 2021*
- Programed video games for academic research of social-ecological systems using Unity and C#.
- Analyzed and synthesized data into accessible forms such as web dashboards using Plotly Dash.
- Communicated and worked effectively as a member of a 10-person development team.

Software Developer Intern, *Packetized Energy*   *Sept 2020 — Dec 2020*
- Contributed production front-end and back-end code to a single-page React application.
- Integrated AWS data into front-end React components using Redux, AWS Lambda, and Serverless.
- Utilized Jest to write unit tests and integration tests for production code.

Teaching Assistant: Data Structures & Algorithms, *University of Vermont*   *Jan 2020 — May 2020*
- Assisted students with conceptual material and C++ programming for CS124: Data Structures and Algorithms.

PROJECTS

UVM Bikes! Website   *uvmbikes.w3.uvm.edu*
- Static website for the UVM student bicycle co-op, built with React, Gatsby, and headless WordPress.
- UI Designed in Figma and implemented with Tailwind CSS.

UVM Cycling Team Website   *cycling.w3.uvm.edu*
- Static website for the UVM Cycling Team, built with React and Gatsby, and styled with vanilla CSS.

Food Insecurity Dashboard   *github.com/lukefredrickson/nfact-dashboard*
- Web dashboard showcasing food insecurity research data by the NFACT research team.
- Written in Python using the Plotly Dash framework.

Raspberry Pi Spotify LED Visualizer   *github.com/lukefredrickson/spotify-led-visualizer*
- Web app which uses Spotify API data to visualize music on an LED strip via a Raspberry Pi server host.
- Utilizes Node.js, Express, and Socket.io to manage user authentication, data flow, and API queries.

TECHNICAL SKILLS

Languages: JavaScript, Python, HTML & CSS, C#, C++, C, R, Java

Libraries & Frameworks: React, Redux, GraphQL, Gatsby, Tailwind CSS, Jest, Serverless

Courses: Data Structures & Algorithms, Algorithm Design & Analysis, Operating Systems, Software Engineering

LEADERSHIP & COMMUNITY INVOLVEMENT

UVM Bikes! (Student Bicycle Co-op)

President   *May 2019 — Present*
- Spearhead club operations, communications, marketing, and execution of long-term club goals.
- Manage a team of over 30 student volunteers and a leadership team of 6 club officers.
- Volunteer 10+ hours a week fixing bicycles for UVM students, faculty, and staff.

Treasurer   *May 2019 — May 2020*
- Established close working relationships with local vendors and negotiated club budget increase of 68.5%.