

LIAM BECKMAN

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A self-driven developer with a passion for crafting software and solutions that work for people.

EDUCATION

Bachelor of Science; Computer Science — Oregon State University
Corvallis, OR / Welches, OR

Class of 2019

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Bachelor of Science; Biology — University of Oregon
Eugene, OR / Uppsala, Sweden

Class of 2017

TECHNICAL WORK EXPERIENCE

Research Software Developer — OHSU, Department of Medical Informatics and Clinical Epidemiology
Portland, OR

2019 — 2020

Furthered development of the [Swing desktop application](#) used to curate data for [Reactome](#) — an open-source database and visualizer of biological pathways used for research. Specific responsibilities included:

- ▷ Updating API calls and data processing of a remote NLP document parser ([REACH](#)).
- ▷ Implementing a custom class to flag pathway and reaction revisions between varying data sets.
- ▷ Adding new features based on communication with users and database curators.
- ▷ Coauthored project updates in *Nucleic Acids Research* — [The reactome pathway knowledgebase 2022](#).

SELECTED PROJECTS

mdbook-latex — A documentation backend for \LaTeX and PDF generation.
Rust, \LaTeX

2019 — Present

- ▷ A backend for the [mdBook](#) documentation program that converts Markdown sources to \LaTeX and PDF.

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demonic — Interactive demos of programs and programming languages.
Node.js, JavaScript

2018 — Present

- ▷ A suite of applications that allows users to try out programs and programming languages by accessing a [web terminal](#) or running [code snippets](#).
- ▷ Processes are communicated via WebSockets and run in a lightweight Linux sandbox (Debian chroot secured with [Firejail](#)).

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withfeathers — Poetry web app and shell program. “‘Hope’ is the thing with feathers - ...”
Python, Flask

2018 — Present

- ▷ A web app and CLI that fetches, parses, and selects a random poem by Emily Dickinson from [Project Gutenberg](#).
- ▷ A [Flask](#)-powered web interface at withfeathers.liambeckman.com displays a new poem every day.

GENERAL WORK EXPERIENCE

Ski and Snowboard Technician and Shop Hand — Next Adventure

Portland, OR

2021

- ▷ Assisted customers in fitting, renting, and tuning mountaineering and snowsports equipment.

Lab Prep Assistant — University of Oregon Honors Biology Lab

Eugene, OR

2014 — 2015

- ▷ Prepped and sterilized materials for undergraduate biology lab courses
- ▷ Set up personal computers for use with lab-focused programs.

Student Researcher — **Botanical Genetics** — University of Minnesota

Minneapolis, MN

Summer 2014

- ▷ Conducted research involving botanical DNA isolation, purification, sequencing, and analysis
- ▷ Presented results and conclusions at three scientific conferences.

Student Researcher — **Ecology and Restoration** — H.J. Andrews Experimental Forest

Blue River, OR

Summer 2013

- ▷ Analyzed forest networks and plant response to fire disturbances.
- ▷ Surveyed plant communities in experimental sub-alpine meadows as part of ongoing research.
- ▷ Coauthored results in *Restoration Ecology* — [Vegetation Recovery in Slash-Pile Scars Following Conifer Removal in a Grassland-Restoration Experiment](#).

COURSES COMPLETED AT OREGON STATE UNIVERSITY

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| ▷ CS 165 — Accelerated Intro to Computer Science | ▷ CS 344 — Operating Systems I |
| ▷ CS 225 — Discrete Structures in Computer Science | ▷ CS 361 — Software Engineering I |
| ▷ CS 261 — Data Structures | ▷ CS 362 — Software Engineering II |
| ▷ CS 271 — Computer Architecture and Assembly | ▷ CS 372 — Introduction to Computer Networks |
| ▷ CS 290 — Web Development | ▷ CS 373 — Defense Against the Dark Arts |
| ▷ CS 325 — Analysis of Algorithms | ▷ CS 467 — Online Capstone Project |
| ▷ CS 340 — Introduction to Databases | ▷ CS 475 — Introduction to Parallel Programming |