

# LIAM BECKMAN

[liam@liambeckman.com](mailto:liam@liambeckman.com) | [liambeckman.com/code](https://liambeckman.com/code)

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

## EDUCATION

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**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

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**Full Stack Software Developer** — Saltire Software Inc.  
Portland, OR

2022 — Present

Contributed to the fullstack development of [e-commerce](#) and [math & music educational](#) sites.

- ▷ Integrated RESTful APIs for use in authenticating clients during online checkouts.
- ▷ Set up and managed hosting and SSL certification for *On the Sensations of Tone*.

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**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.

- ▷ Implemented a custom class to flag pathway and reaction revisions between varying data sets.
- ▷ Added new UI/UX features based upon communication with users and research database curators.
- ▷ Updated API calls and data processing of a remote NLP document parser ([REACH](#)).
- ▷ Received coauthor credit in *Nucleic Acids Research* — [The reactome pathway knowledgebase 2022](#).

## SELECTED PROJECTS

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**convida** — Conway's Game of Life powered by WebAssembly.  
Rust, WebAssembly, JavaScript

2019 — Present

- ▷ A Conway's Game of Life simulation with a high performance WebAssembly compilation target.
- ▷ A demonstration is available at [convida.liambeckman.com](https://convida.liambeckman.com).

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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](#)).

**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](http://withfeathers.liambeckman.com) displays a new poem every day.

## GENERAL WORK EXPERIENCE

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**Ski and Snowboard Technician and Shop Hand** — Next Adventure  
Portland, OR

2021 — 2022

- ▷ Assisted 50+ customers a day in fitting, renting, and tuning mountaineering and snowsports equipment.

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**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.

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**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.

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