LIAM BECKMAN

liam@liambeckman.com | liambeckman.com/code

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

Full Stack Software Developer — Saltire Softare 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

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.

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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 displays a new poem every day.

GENERAL WORK EXPERIENCE

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

▷ **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

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