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

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 — Present

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.

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.

Voyager Index — Quality of life application to help world travelers find their next home.
JavaScript, PostgreSQL, Go, Python, HTML, CSS — 2019 — Present

A world map of over 7,000 cities ranked by user-selected filters. Personally spearheaded the development of the server and CLI for the Voyager Index project. Specific contributions included standardizing server interactions with the database, hosting the PostgreSQL database on a personal Raspberry Pi, and presenting the final product .

demonic* — Interactive demos of programs and programming languages.
Node.js, JavaScript, Go — 2018 — Present

A suite of applications that allows users to try out programs and programming languages by accessing a simple web interface , reading documentation , or even experimenting from the command line . 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 hostable web interface at withfeathers.liambeckman.com displays a new poem every day.

* Personal project.

GENERAL WORK EXPERIENCE

Ski and Snowboard Technician and Shop Hand — Mountain Sports
Welches, OR — Winter 2018, Winter 2019

- Assisted customers in tuning skis and snowboards, recommending local trails and recreational areas, and renting and buying select winter gear. Other responsibilities included itemizing, inspecting, and restocking equipment.

Lab Prep Assistant — University of Oregon Honors Biology Lab
Eugene, OR — 2014 — 2015

- Prepped materials and cleaned up workstations for undergraduate biology lab courses.
- Set up student computers with programs used to collect, analyze, and present lab data.
- Monitored growth and maintenance of plant, animal, and microbial lab specimens.

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.
- Published study in *Restoration Ecology: The Journal of the Society for Ecological Restoration* ("Vegetation Recovery in Slash-Pile Scars Following Conifer Removal in a Grassland-Restoration Experiment", November 2014).

COURSES COMPLETED AT OREGON STATE UNIVERSITY

- **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