LIAM BECKMAN

liam@liambeckman.com | liambeckman.com/code

A self-driven developer who loves helping organizations increase their impact by crafting software and solutions that work for people. Online resume available at liambeckman.com/resume.

EDUCATION

Bachelor of Science; Computer Science — Oregon State University Postbaccalaureate, 3.64 GPA
Graduated June 2019 — Corvallis, OR

Bachelor of Science; Biology — University of Oregon Presidential Scholar, 3.34 GPA
Graduated June 2017 — Eugene, OR

TECHNICAL WORK EXPERIENCE

Research Software Developer — OHSU, Department of Medical Informatics and Clinical Epidemiology
September, 2019 — June, 2020 — Portland, OR

Further developed and maintained the Swing desktop application used to curate the data in Reactome — an open-source database and visualizer of biological pathways used in research. Specific responsibilities included:

- ▷ Implementing an "UpdateTracker" class to flag pathway and reaction revisions between two different data sets.
- ▷ Extending the look and feel of entities and complexes to relfect drug status.
- ▷ Updating API calls and data processing of a remote NLP document parser (REACH).

SELECTED PROJECTS

Voyager Index — Quality of life application to help world travelers find their next home.
JavaScript, PostgreSQL, Go, Python, HTML, CSS — github.com/voyager-index

Spearheaded the development of the server and CLI for the Voyager Index project — a world map of over 7,000 cities ranked by 23 user-selected filters. My largest contributions included standardizing server interactions with the database, hosting the PostgreSQL database on personal server, and designing and presenting the finished product.

mdbook-latex* — A documentation backend for mdbook used to generate LaTeX and PDF documents.
Rust, LaTeX — github.com/lbeckman314/mdbook-latex

Wrote a documentation program that takes Markdown input and produces LaTeX output. An optional feature includes PDF compilation (e.g. the official introductory book to Rust — *The Rust Programming Language*).

demo* — Terminal emulator emulator that allows users to try out programs.
Node.js, JavaScript, Go — github.com/lbeckman314/demo

Created 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 (currently a Debian chroot secured with Firejail).

withfeathers* — Poetry web app and shell program. "'Hope' is the thing with feathers - ..."
Python, Flask — github.com/lbeckman314/withfeathers

Developed 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.

liambeckman.com* — Personal website, development platform, and portfolio.
JavaScript, HTML, CSS github.com/lbeckman314/website

A personal website and collection of software development tools, including a Git server and a Jenkins instance. The website and all projects are hosted on personal servers (Raspbian on RPi3 Model B and FreeBSD on Thinkpad x230).

GENERAL WORK EXPERIENCE

Ski and Snowboard Technician and Shop Hand — Welches, OR
Mountain Sports January — April, 2019

Assisted customers in finding, tuning, and renting or buying select winter gear. I regularly guided them in choosing skis, snowboards, snowshoes, or cold-weather apparel that would keep them safe while exploring the Mt. Hood wilderness. Other responsibilities included restocking equipment, maintaining sale records, and recommending recreational areas based on customer experience.

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

Prepared materials and procedures for The Honors Biology Lab curriculum at the University of Oregon. Relevant responsibilities included making and curing petri plate solutions, evaluating states and types of bacterial growth, and studying the processes and mechanisms of cytological phenotypic expression and function.

Student Researcher—Botanical Genetics — Minneapolis, MN
University of Minnesota May — August, 2014

Conducted research involving botanical DNA isolation, purification, sequencing, and analysis; examined the effect of personally designed genetic markers had on a tropical tree's evolution/phylogeny; presented results and conclusions at the following scientific conferences:

- The 2015 AAAS Emerging Researchers National Conference in STEM hosted in Washington D.C.
- The 2015 University of Oregon Undergraduate Research Symposium
- The 2014 University of Minnesota Undergraduate Symposium

Student Researcher—Ecology and Restoration — Blue River, OR
H.J. Andrews Experimental Forest June — August, 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

- **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

* Personal project.
LaTeX source: github.com/lbeckman314/resume