LIAM BECKMAN

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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

EXPERIENCE

- **Software Workflows** — 2 years working with and releasing projects via VCS. Git and Jenkins servers hosted on a personal single board computer provide continuous integration and delivery for my own software projects.
- **Unix** — 2 years developing software on GNU+Linux systems (currently running self-compiled 5.1.6 kernel).
- **Object Oriented Design** — 1+ years developing software with OOD principles in Java and JavaScript.
- **Scripting Languages** — 1+ years scripting projects and workflows with Python and Bash.

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. It includes national and international climate, economic, and safety data.

- Standardized server interactions with the database (via the asynchronous function swimming_pool()).
- Hosted entire PostgreSQL database on personal single board computer (Raspbian on RPi3 Model B).
- Integrated and configured webpack and Node.js development workflows.

RemoveMyWaste — map application for hazardous waste removal.
Java, MariaDB/MySQL, SQLite, JavaScript, HTML, CSS — github.com/RemoveMyWaste

Lead development of RemoveMyWaste, an application for the safe disposal of hazardous household and industrial materials. Users can locate disposal centers near them and read information on the materials they wish to dispose of.

- Created Android and web interfaces. Hosted web and database components on personal server.

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

Created a suite of remote applications to allow users to try out programs and programming languages by accessing a simple web app, 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 makes these poem selections available to anyone with an internet access.

* Interactive demos available at liambeckman.com/code#terminal — LaTeX source: git.io/fhsem

COURSES

- **CS 165** — Accelerated Introduction To Computer Science
- **CS 225** — Discrete Structures In Computer Science
- **CS 261** — Data Structures
- **CS 271** — Computer Architecture And Assembly Languague
- **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

EXTRAS

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

"Research Experiences for Undergraduates" Internship at University of Minnesota — Minneapolis, MN
Student Researcher—Botanical Genetics — 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

Ecological Apprenticeship at H.J. Andrews Experimental Forest — Blue River, OR
Student Researcher—Ecology and Restoration — 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).