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

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Bachelor of Science; Biology — University of Oregon
Eugene, OR / Uppsala, Sweden   Class of 2017

TECHNICAL WORK EXPERIENCE

Research Software Engineer — Oregon Health & Science University
Go, Python, Kubernetes, MongoDB, Postgres   2023 — Present

Workflow Engine Led development of workflow engine and orchestator (Funnel)

▷ Developed and maintained Funnel, a GA4GH Task Execution Service (TES) implementation; contributed features including TES v1.1 support, a new MongoDB driver, Slurm/Exacloud integration, and custom plugins.

▷ *The GA4GH Task Execution Application Programming Interface: Enabling Easy Multicloud Task Execution*

DevOps & Cloud Infrastructure Led development and DevOps for high-throughput computational biology platforms and data commons infrastructure.

▷ Platform setup + CI/CD, Monitoring + alerting

▷ Architected and managed cloud infrastructure using Terraform and Helm; automated deployments, backup/restore, and compliance for Gen3 data commons instances (ACED-IDP, CBDS) on AWS and OpenStack.

▷ Developed the DRS Downloader (Go/Python) for secure, cross-cloud DRS data transfer (e.g. AnVIL/Terra) and maintained the data client for simplified data management/ETL.

▷ Contributed to FHIR data modeling and the OMOPonFHIR utility for clinical data validation and aggregation.

▷ *An integrated data platform to support the international alliance for cancer early detection*

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Full Stack Software Developer — Saltire Softare Inc.
Portland, OR   June, 2022 — August, 2022

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
Java, Swing, RESTful APIs   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).

▷ Coauthored paper 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.

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LaTeX source: github.com/lbeckman314/resume   Compiled: 2025-10-28