

Koa Calloway

Portfolio: koacalloway.com | linkedin.com/in/koa-calloway | github.com/Ricefrog | kalloway@ucsd.edu | (310) 500 0173

EDUCATION

University of California San Diego

Fall 2021 - Spring 2023

Jacob's School of Engineering
BS Computer Science

Long Beach City College

Spring 2019 - Spring 2021

AS Computer Science, ADT Mathematics
Honors Program | Placed on the Dean's List with Great Distinction four times
GPA: 3.957

Relevant Coursework: Data Structures and Algorithms, Computer Architecture, Discrete Math, Calculus series, Differential Equations & Linear Algebra

PROJECTS

Fractal Heaven | Go, React, Tailwind CSS, serverless architecture

A web app that allows for users to explore beautiful fractals.

- Used complex numbers and calculus to implement the Mandelbrot set and Newton fractals in Go.
- Repurposed the backend development API to utilize serverless architecture in the deployment environment.
- Leveraged Go's concurrency features to optimize render times by ~400%.
- Utilized HTML canvas to allow for intuitive and frictionless spatial navigation.

Live Demo: <https://fractal-heaven.vercel.app/>

GitHub: <https://github.com/Ricefrog/FractalHeaven>

Project Reflection/Write-up: <https://www.koacalloway.com/projects/fractalHeaven>

hypermark | Go, bubbletea, lipgloss, colly

Bookmarks; improved. An extensible TUI-based knowledge-management system.

- Learned how to organize and plan larger projects (2000+ LOC).
- Learned the bubbletea and lipgloss libraries to create a terminal-based UI.
- Utilized the colly web-scraping library to download data from Hacker News.
- Built project with simplicity in mind; hypermark revolves around the use of plaintext markdown files, no database required.
- Manually managed a large number of state variables that are utilized during runtime.
- Designed the program to be used as either a TUI or CLI application.

GitHub: <https://github.com/Ricefrog/hypermark>

Project Reflection/Write-up: <https://www.koacalloway.com/projects/hypermark>

SKILLS

Programming Languages:

C, C++, Go, Python, Javascript, Bash

Libraries/Frameworks/Platforms:

React, Next.js, Vercel, Tailwind CSS

Other:

Git, GNU/Linux, Vim

EXPERIENCE

Cheadle Center for Biodiversity & Ecological Restoration | Research Volunteer

September 2018 - December 2018

- Performed field collection, data entry, species identification, and specimen preservation for an entomological research study.

McDonald's | Cashier

January 2019 - July 2019

- Money management, customer service, quick decision-making.