

# Robert Vermeulen

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## WORK EXPERIENCE

**Software Engineering Intern** - Firstleaf Wine Company in Napa, CA (Remote) - (June 2023 - Sept 2023)

Key Skills: [ReactJS & Jest](#), [SCSS](#), [Ruby on Rails](#), [REST API Endpoints & HTTP requests](#), [SCRUM](#), [Development Life Cycle](#).

- Produced many new frontend components for the site, testing the functionality w/ Jest & the deployment w/ chrome dev tools.
- Fixed UX bugs from existing code, modified previously made components to be used w/ new ones, & replaced deprecated code.
- Updated a backend endpoint to change the data being sent from HTTP requests to configure the call for a new type of product.
- Taught myself styling & two unfamiliar frameworks, ReactJS & Ruby on Rails, developing a proactive approach to self-learning.

**Reviews Page** - (Internship Capstone Project) - [Firstleaf.com/reviews](https://firstleaf.com/reviews)

- Enhanced company SEO by building a new landing page from scratch, w/ multiple custom components & 4 UI breakpoints.
- Connected to an API to receive content & create a feature flag. Optimized breakpoints by fixing bugs arisen from using old code.
- Worked in collaboration w/ product designers to implement their ideas, requiring me to communicate issues effectively to them.

**Head Lifeguard/Swim Instructor** - GCC (Oct 2018 - Dec 2022) - Applewood Knolls (May 2018 - Sept 2020) - Golden, CO

Key Skills: [Management & Team Coordination](#), [Program Development](#), [Problem Solving](#), [Leadership](#), [Communication to Team](#)

- Directed & motivated teams of between 15 - 20 other lifeguards, ensuring quality facility operation, safety, & patron satisfaction.
- Resolved issues in a fast paced environment, such as difficult patrons, unmotivated employees, & a sudden management vacancy.
- Communicated between employees & management to facilitate new programs, improve existing ones, & meet the patron's needs.

## EDUCATION

**California Polytechnic State University, San Luis Obispo**

**Expected December 2024**

- B.S. in Computer Science with a minor in Mathematics | GPA: 3.4/4.0
- President's Honors List 2022-23; Dean's List for Spring 2023, Winter 2023 & Fall 2022 quarters.

## KEY SKILLS AND COMPETENCIES

**Languages:** JavaScript | Python | SQL | Java | HTML | CSS/SCSS | Ruby | C/C++

**Tools:** Git | ReactJS | MySQL | React Native | Linux (Ubuntu) | Ruby on Rails | JupyterLab | Jest | React Bootstrap | P5.js

## RECENT SOFTWARE PROJECTS

**Database Analysis** - (Database Systems Final Project using SQL & Python) - [r303vermeulen.github.io/UrbanUnrest/](https://github.com/r303vermeulen/UrbanUnrest/)

- Devised 5 intriguing questions to analyze an extensive relational database, crafting & deploying complex nested queries for each.
- Connected to a MySQL server that hosted the database to send query requests & receive the results within a python host.
- Visually represented results using Matplotlib and Pygal libraries, allowing each subsequent question to build off any observations.

**Image Decode w/ Parallel Processing** - (Systems Programming Final Project using C/C++)

- Constructed an algorithm featuring dynamic memory allocation to decode a compressed .bin file & convert it to a .bmp image.
- Quadrupled efficiency by utilizing parallel processing, w/ each path converting a quarter of the data stream into pixel objects.
- Engineered various class structures to minimize memory used by malloc, merge the pixel data, & effectively create the bitmap file.

**Games & Digital Art Site** - (Personal Project using Javascript, P5.js, & HTML) - [r303vermeulen.github.io/Games&DigitalArt/](https://github.com/r303vermeulen/Games&DigitalArt/)

- Built multiple single player games completely from scratch. Designed captivating game interfaces, digital art pieces, & animations.
- Created a bot to play for users that evaluates each move by ranking all of the possible game states reachable in 2 additional moves.
- Implemented code optimization techniques through various data structures to increase efficiency & allow for smooth gameplay.

## LEADERSHIP ROLES AND VOLUNTEER WORK

**Philanthropy Chair** (Jan 2022 - Jan 2023) - **Mental Health Awareness Chair** (Fall 2021) - Sigma Pi Eta-Delta Chapter

- Managed a team of 4 directors & a network of 100 volunteers to contribute over 2,000 service hours annually in our community.
- Single-handedly planned & executed multiple campus outreach events & quarterly fundraisers, each generating \$1,000 - \$5,000.
- Communicated between external venues, service providers, & internal budget management to coordinate & facilitate events.

**Media Director of 1st Annual 'HOPEful Drive' Fundraiser** (Winter 2019) - Robbie's Hope Foundation

- Collaborated w/ 3 students to imagine, design, & direct the first ever annual HOPEful Drive, a competitive fundraising initiative.
- Created, facilitated, & led a team of 20+ ambassadors to advertise the fundraiser across the county, allowing it to raise \$24,000+.
- Founding member, assisting the construction of a teen suicide awareness nonprofit that has grown to a nationwide foundation.

**Developer for Hack4Impact** (Sept 2023 - current) | **Mentor for Freshman Engineering Students** (Jun 2023 - current)