Mathew **Kramsch**

UCSB COMPUTER SCIENCE STUDENT · FULL-STACK SOFTWARE DEVELOPER

✉ mathewkramsch@ucsb.edu | ⬡ github.com/mathewkramsch | 🔗 linkedin.com/in/mathew-kramsch | ⌂ mathewkramsch.com

Education

University of California, Santa Barbara   *Expected Graduation: Jun. 2022*

BACHELOR OF SCIENCE IN COMPUTER SCIENCE   *Sep. 2017 - Jun. 2022*

- **Relevant Courses:** Data Structures and Algorithms I,II · Object Oriented Design and Implementation
  Advanced Applications Programming · Team-based Web-App Development Project · Computational Science · Computer Architecture
  Computer Organization and Logic Design · Database Systems · Computer Communication Networking · Operating Systems
- **GPA:** 3.54

Work Experience

Front-End Web Developer   *Santa Barbara, CA*

TUFFHOUSE INC.   *Dec. 2021 - Current*

Worked as sole front-end developer for start-up company based in Santa Barbara to design and implement a scalable online store website.
- Used React.js and SASS to build a fully responsive front-end from scratch, including a dynamic online store with a persistent shopping cart and a dynamic blog, connected to a Django and Python back-end.
- Implemented server-side rendering for search engine optimization using Next.js.
- Used Figma to design and prototype responsive wireframes for site pages and to build a clean and intuitive user interface

Projects

KOS Operating System   *Santa Barbara, CA*

UC SANTA BARBARA   *Sep. 2021 - Dec. 2021*

Designed and implemented a functional light-weight operating system kernel for a simulated DEC MIPS R3000 machine from scratch in C.
- Implemented the baseline Linux system call interface necessary to run a fully-capable command line shell and to implement pipes
- Developed simple time-shared multi-programming, task switching, interrupt and exception handling, and time-slicing
- Exercised test-driven development practices, writing tests in C cross-compiled for the MIPS R3000 to extensively test the OS against Linux
- Demonstrated advanced knowledge of memory management, asynchronous systems development, multi-threading, and kernel programming
- Programmed completely in C using a non-preemptive threads library, semaphores, and GDB for debugging

Isla Vista Housing Search   *Isla Vista, CA*

UC SANTA BARBARA   *Mar. 2020 - Jun. 2020*

Created production-ready web application to facilitate the housing search process, allowing users to post and browse housing listings.
- Wrote organized, thoroughly documented, and scalable code using React, Next.js, JavaScript, HTML/CSS, and Node.js
- Used the Heroku cloud platform to host production and quality assurance deployments of application
- Maintained a MongoDB NoSQL database to manage and dynamically store housing and user data
- Integrated application with Mapbox API for visually comparing housing listings on a map of Isla Vista
- Integrated with Auth0 API with Google Sign-In for secure user authentication to allow logged-in users to post and edit housing data
- Implemented responsive and cross-browser capable website with a cohesive visual design, and reusable user interface components
- Employed Agile and SCRUM methodologies, continuous integration principles, and comprehensive Cypress and Jest testing
- Developed in a team of five, utilizing GitHub for collaborative programming and Git version control branching

Front-End Web Development Online Courses   *Santa Barbara, CA*

THE ODIN PROJECT, FREECODECAMP   *Aug. 2020 - Sep. 2020*

Took two intensive extracurricular online courses in front-end web development, JavaScript, HTML, and CSS.
- Covered in-depth JavaScript, HTML, and CSS, website deployment, search engine optimization, and HTML5 accessibility practices
- Attained proficiency in front-end web development, JavaScript, HTML, CSS, and user interface/experience design
- Honed advanced visual design skills with CSS, CSS animation and graphic creation
- Gained experience in creating responsive and complex web-page layouts using CSS Grid and CSS Flexbox
- Created web development projects including mock landing pages, browser-based games, and various in-browser JavaScript utility applications

Skills

Programming Languages, etc: C · C++ · Java · Python · JavaScript · OCaml · λ^+ · HTML/CSS · LaTeX · SQLite · Datalog

Tools & Technologies: React · Next.js · SASS · Node.js · MongoDB · Figma · Git · Heroku · Vercel · Eigen3 · OpenCV
Jupyter Notebook · numpy · pytorch · GDB · valgrind · Bash

Industry Skills: Object-Oriented Programming · Version Control Branching · Continuous Integration · Database Management
Scientific Computation · Search Engine Optimization · Socket Programming · Kernel Programming · UI/UX Design