Mathew **Kramsch**

UCSB Computer Science Student · Full-Stack Software Developer

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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

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 task switching, interrupt and exception handling, Linux system calls, and time-slicing
- Developed simple time-shared multi-programming that allows up to eight user processes to run and share the OS's main memory at a time
- OS capable of running a shell to fork and execute processes, print to console, and run multiple user programs with arguments
- 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 designed to facilitate the housing search process in Isla Vista.
- Allowed users looking to find potential sublease tenants to login and post house listings
- Allowed users looking to find housing to filter and sort available housing according to price, size, and location preferences
- Maintained a MongoDB database to manage and store housing data
- Integrated with Mapbox API to visually compare housing listings
- Developed in a team of five, utilized GitHub for collaborative programming using Git, project organization, and project management
- Built with JavaScript, HTML/CSS, React, Next.js, Node.js

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 UI design
- Advanced visual design with CSS, CSS animation and graphic creation
- Responsive and complex web-page layouts with CSS Grid and CSS Flexbox
- Coursework involved over 10 web development projects including landing pages, personal portfolio website, JavaScript games with user interfaces, various in-browser JavaScript utility applications

Skills

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

Tools & Technologies: React · Next.js · SASS · Node.js · MongoDB · Git · GitHub · Jupyter Notebook · Heroku · GDB

Industry Skills: Object-Oriented Programming · Agile Methodologies · Test-Driven Development · Team Programming
User Experience Design · Visual Design · Server & Database Management · Algorithm Time/Space Complexity Analysis
Search Engine Optimization · Socket & Kernel Programming · Client/Server Communication · Scientific Computation

Work Experience

The Haley Hotel   *Santa Barbara, CA*

Front Desk Associate   *Jun. 2021 - Oct. 2021*

Worked as front desk attendant/ receptionist for small boutique hotel, performing a variety of clerical and administrative tasks.

Hope Refuge   *Santa Ynez, CA*

Line Cook   *Mar. 2020 - Nov. 2020*

Worked as a cook for a newly opened non-profit residential therapeutic and rehabilitative program for teenagers.