

Mathew Kramersch

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 the baseline Linux system call interface necessary to run a shell capable of executing user programs and printing to console
- 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 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 • numpy • Eigen3 • OpenCV • Git • GitHub
Jupyter Notebook • Heroku • Vercel • GDB • valgrind

Industry Skills: Object-Oriented Programming • Agile Methodologies (Scrum) • Test-Driven Development • Version Control Branching
Continuous Integration • UI/UX 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.