

Vikram Singh

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EDUCATION

University of Massachusetts Amherst

- B.S. in Computer Science, Mathematical Computing. GPA: 3.92/4.0. **Expected in May 2023**
 - CS Courses: Introduction to Artificial Intelligence (CS383), Introduction to Computation (CS250), Computer Systems Principles (CS230), Programming Methodology (CS220), Reasoning Under Uncertainty (CS240), Programming with Data Structures (CS187)
 - Math Courses: Introduction to Linear Algebra (MATH235), Calculus III (MATH233), Calculus II (MATH132)

TECHNICAL SKILLS

- Java, Swift, C, C#, Python, MATLAB, HTML, CSS, JavaScript, React.
- Figma, Eclipse, Xcode, Visual Studio Code, Linux/Unix, D3.js, GitHub, Microsoft Office, Miro, Jira.

WORK EXPERIENCE

Liberty Mutual Insurance, User Experience/Software Engineer Intern

May 2021 – Current

- Contributed to Liberty Mutual's GRS design system (FLUID) by implementing a high-performance, customizable, technology agnostic list component. This component ensures interface/experience consistency throughout internal applications, leading to a decrease in frontend development time and cost. This project involved working on an Agile team, using UX design principles and tools (Sketch and Figma), as well as front-end development skills (StencilJS, JavaScript, TypeScript, JSX, HTML, CSS, Less, React).
- Built a GRS Insurance Ecosystem Map to be used for resource allocation and pain point analysis by conducting user interviews with various employees, interpreting/analyzing personas, and conducting + compiling research from internal information sources.
- Created user-centered, low to high-fidelity mockups, wireframes, and prototypes with Balsamiq, Figma, and Sketch with a focus on usability and accessibility.
- Researched 17 UX Concepts to produce an informational deck for product guidance and decision making by stakeholders (including concepts such as developer handoff/collaboration and qualitative data synthesis).

BUILD UMass, Software Engineer

September 2020 - Current

- Built and implemented a D3.js Data Visualization component (Zoomable Circle Packing) into a React web application that helps manage, navigate, and visualize data around organizations (and their properties).
- Developed an algorithm that structures and formats unordered back-end data into organized, hierarchical data to be used on the front-end. This involves sorting, searching, and making use of various data structures to minimize runtime and space complexity
- Working on a team and using source control tools (git)

Freelance, iOS Software Developer

April 2020 - October 2020

- Worked with Swift and Xcode debugging tools to modify existing software, correct programming errors, and improve time and space complexity for clients' applications.
- Leveraged database technologies such as SQLite, Core Data, Realm (and Realm Sync), and Firebase to allow applications to store data both locally and in the cloud.
- Developed complex algorithms to accomplish clients' tasks - such as analyzing user goals and health data to plan and construct a science-based workout and diet program.

FEATURED PROJECT

Studium - Time Management (2020 - Current)

- iOS Application that utilizes MVC design pattern to allow students to track assignments, courses, and healthy habits, saving over 1 hour/week of scheduling on average. Xcode, Swift, UIKit, Realm, Cocoapods.
- Utilizes Algorithms to automatically analyze and schedule events around courses and assignments, thereby aiding over 100 students by providing impactful tools for time management and organization.