

# JACOB WARTHEN

San Francisco, CA 94118

Cell: (360) 953-4455 – Jacob020707@gmail.com - <http://jacobwarthen.me/>

---

## EDUCATION

### Bachelor of Science: Computer Science

Sep '20 – May '23

*University of San Francisco* – San Francisco, CA – 3.85 GPA

- Relevant Coursework: Data structures, Algorithms, Software Development, C and Systems, Linear Algebra
  - Management: Manage time between Division 1 soccer program and Computer Science Program
- 

## SKILLS

- Java, Python, C, C++, JavaScript, HTML, CSS, ReactJS, React Native, SQL, MySQL, MongoDB
  - GitHub, Git, AWS, Bootstrap, Regex, Jetty, JDBC, Apache, JUnit, Maven
  - Linux, Unix, Windows, Macintosh, Eclipse
- 

## PROJECTS

### Full Stack Search Engine

- Engineered a search engine totaling 5,000+ lines that utilizes complex data structures and crawls the web
- Developed the program as a backend and frontend multi-threaded in-memory inverted index, web crawler, and search engine that is database-backed and tracks users via cookies
- Built the application and automated testing by implementing 500+ unique Junit tests
- Refactored code numerous times for efficiency, scalability, and reusability after completing many one-on-one code reviews optimizing the code ~10% - 20% after each review
- Coded its functionality using ~75% Java along with HTML, CSS, SQL, HTTP, Junit, AWS, and Bootstrap

### Pathfinding Visualizer

- Developed a visualizer that utilizes implementations of A\*, Dijkstra's Greedy Best-First, Breadth-First, Bidirectional Greedy, Depth First, and Random Walk Algorithms to find and display the shortest path between two points
- Designed the program functionality using ~95% JavaScript and integrated a GUI using React framework along with HTML and CSS to increase usability

### Word Prediction

- Produced a program that makes use of many advanced data structures and a data file to suggest the most likely completion of a word with ~99% accuracy
- Employs an input file containing 700,000+ lines of data detailing the most frequently used and misspelled words in the U.S.
- Programmed its core functionality using ~97% Java and assembled a frontend using HTML and CSS

### Personal Portfolio Website

- Built and deployed a completely responsive personal portfolio website using GitHub Pages
  - Coded the website using JavaScript, HTML, and CSS
- 

## WORK EXPERIENCE

### Web Designer

April '21 – Dec '21

*Teague's Interiors* – Longview, WA

- Complete re-design of company website effectively increasing monthly sales by 30%+
- Worked closely with client to ensure exact requirements optimizing the previous website by ~40% - 50%
- Modified and restructured ~75% of existing website using JavaScript, HTML, and CSS

### Owner

June '20 – Nov '21

*Self Employed - Ecommerce* – WA

- Devised and deployed an efficient and effective online store using liquid resulting in a 5x ROI
  - Managed day-to-day operations and fulfilled numerous orders to ensure 100% customer satisfaction
- 

## ADDITIONAL SKILLS

- MS PowerPoint, MS Excel, MS Word, Adobe Photoshop, SEO, Google Analytics, Facebook Advertising
- English, Spanish