

## Suraj Harjani

sharjani@umich.edu • (734) 881-3337 • Ann Arbor, MI

[linkedin.com/in/surajharjani](https://www.linkedin.com/in/surajharjani)

[github.com/SurajH1](https://github.com/SurajH1)

### EDUCATION

#### University of Michigan, Ann Arbor

B.S.E. Computer Science Engineering (Dean's List)

Minor in Public Policy

Graduation: December 2021

GPA: 3.6/4.0

#### Relevant Courses

Data Structures & Algorithms, Computer Science Pragmatics, Computer Organization, Linear Algebra, **Software Engineering**, Computer Science Fundamentals, **Computer Vision**, **Web Systems**, Operating Systems

### EXPERIENCES

#### Skills, Tools and Languages

**JavaScript (Node.js, React, Vanilla), C++, Python**, C, ARM, Bash(Unix Shell), Git, HTML5, CSS, JSON,

#### Programmer – CHEPS (C++)

September 2020 – December 2020

- Pair programmed with other research assistants, creating comprehensive documentation and code that was easy to read and follow
- Built a robust simulation that used efficient data structures and algorithms adopted from the stl library to simulate real life events and collect metrics.
- Created Simulation using C++ to model hospital capacity and analyze impact on scheduling with different pathways of prenatal care

#### Search Engine (Hadoop, Python, Flask)

October 2020 – December 2020

- Built a scalable MapReduce pipeline to produce an inverted index, and successfully tested the pipeline on a pre-scraped library of 1000's of Wikipedia pages.
- Calculated PageRank of each page using python script and attached inverted index and PageRank data to Restful API using Flask and built a search engine UI to query the API.

#### Project Manager - BOND Consulting Group

January 2019 – Present

- Helped a green energy provider with analyzing sales potential and provided a financial framework to decide on a go-to market strategy
- Collaborated with an industry leading barber shop to overhaul staffing schedules and delivered quantitative models to advise on strategy to reach revenue goals
- Led a team of 5 consultants to assemble a valuation tool for a global confectionery company and used it to formulate operational and logistical recommendations to improve profits

#### Car Pool web app (JavaScript, HTML, CSS, Firebase)

August 2020 – September 2020

- Designed and built RESTful API using NoSQL database with server less functions for securely handling data while allowing for scalability
- Assessed security risks and assembled interactive client-side application that provided all API functionality in an easy to use, secure interface

#### Pandas Open Source Contributions (Python)

January 2019 - March 2020

- Analyzed stack traces and instrumentation tools to narrow down bugs in cloned Pandas repository to an error in abstract syntax tree traversal which led to the implementation of a recursive step to fix the issue
- Performed test driven development in order to ensure software requirements were being met by the contributions and contributed regression tests to the repository to help developers make effective contributions

### ADDITIONAL

- I have a strong desire to see the projects I contribute to reach completion and see my work be used in the real world in having a positive societal impact.
- Other experiences include being a Resident Advisor at the University of Michigan, and leading the Multicultural Council in my residence hall as President of the organization.