

Suraj Harjani

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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

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

Languages

, C++, Python, Vanilla JavaScript, Node.js, React, C, ARM, Bash

Tools

WORK & CLUB EXPERIENCES

Center for Healthcare Engineering and Patient Safety

Software Developer (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

BOND Consulting Group

Project Manager

January 2019 - December 2020

- Helped a green energy provider with analyzing sales potential and provided a financial framework to decide on a go-to market strategy
- 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

SI 405, Senior Capstone

Instructional Aide

September 2020 – December 2020

- Organized discussion courses for senior capstone course where students collaborate with real world clients on delivering UX or information Analysis solutions to be implemented in the business.
- Assisted team groups in maximizing their time with each other in planning and implementing their project work while offering advice on maximizing team efficiency

OTHER NOTABLE PROJECTS

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.

Pandas Open Source (Python library)

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

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