Suraj Harjani

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EDUCATION

University of Michigan, Ann Arbor   **Graduation: December 2021**

B.S.E. Computer Science Engineering (Dean's List) | Minor in Public Policy   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

Advanced: C++, Python, Vanilla JavaScript React.js, Bash   **Intermediate**: C, Node.js, SQL   **Beginner**: ARM,C#

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**

- Advised 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.

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
- Evaluated PageRank of each page using python script and served inverted index and PageRank data on 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 git 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 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 cloud functions for securely handling data while designing for scalability on the Firebase platform
- Assessed security risks and assembled interactive client-side application that provided all API functionality in an easy to use, secure interface