**Suraj Menon**

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**EDUCATION**

**University of Michigan Ann Arbor, MI**

*MEng in Medical Product Engineering and Development August 2024-May 2025*

*B.S.E. in Biomedical Engineering August 2020-May 2024*

*Minor in Computer Science, Multidisciplinary Design*

GPA 3.68/4.00

Coursework: Biomedical Design, Biomedical Instrumentation and Design, Design and Applications of Biomaterials, Artificial Intelligence and Machine Learning, Software Engineering, Biostatistics, Qualitative Physiology, Tissue Engineering, Biophysical Chemistry, Quantitative Cell Biology. Biofluid Mechanics

**EXPERIENCE**

**Center for Health Engineering and Patient Safety Ann Arbor, MI**

*Software Engineer May 2024-present*

* Designing discrete event simulation in python to model Michigan Medicine schedules and patient appointment requests to generate metrics on schedule utilization, patient delay time, and patient volume
* Employing Agile Development to accelerate prototype development across functional teams
* Constructing core simulation database to be used across 3 Michigan Medicine joint projects
* Finalizing departmental tool to schedule 50% of new patients within 2 weeks of their appointment request

**University of Michigan Ann Arbor, MI**

*Research Assistant May 2021-present*

* Applying machine-learning using Python sklearn to predict metabolic variation across 1000 cancer cell lines from matched oct-omics data to classify major influencers of cancer metabolism
* Ran Shapley Analysis to discover redox metabolism and signaling-related transcripts, features, proteins, and phosphoproteins as top global regulators for 225 metabolites in cancer metabolome
* Unveiled main predictors for use in combination therapies to target compensatory metabolic modulators

**Procter & Gamble                             Lima, OH**

*Packing Operations Intern                    May 2023-August 2023*

* Implemented product reject tracking system to reduce net savings losses by $9,325
* Configured digital interlock to standardize product changeover process to limit reject scrap by 10%
* Generated Power BI dashboard to easily identify trends in material losses across 8 production lines
* Executed hands-on technical trainings with 22 operational teams to ensure operational excellence

**ACTIVITIES**

**Michigan Health Engineered for All Lives Ann Arbor, MI**

*Team PACT Project Co-Founder and Lead August 2021-present*

* Founded project to design a non-invasive cervical cancer screening urine collection device for the Korle Bu Hospital in Ghana to enhance the 2.5% cervical cancer screening rate for women in Accra
* Leading 9 engineers to design a prototype in SolidWorks for clinical testing with 300 patients
* Performing FEA on 4 device parts in COMSOL to confirm device functionality
* Partnered with faculty and industry mentors to draft proposal for $150,000 Gates foundation grant

**Worcester Polytechnic Institute Worcester, MA**

*Device Developer May-August 2022*

* Led project to design a device to detect 21 unique counterfeit medications for communities in Nigeria
* Applied Fusion360 to model device to analyze active pharmaceutical ingredient content in medication
* Found to correctly identify counterfeit medications with up to 90% accuracy

**SKILLS**

* **Platforms:** Windows, Mac OS, Linux, GitHub
* **Languages:** C++/C, MATLAB, Python, SQL, JavaScript, Java, JSON, HTML, CSS
* **Programs:** SOLIDWORKS, Autodesk Fusion 360, COMSOL, Visual Studio Code, Power BI, Arduino