Jonathan Sarasohn

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EDUCATION

Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science
Bachelor of Science in Mechanical Engineering *Expected May 2024*
Bachelor of Arts in Geography with a Concentration in Urban and Regional Planning *Expected May 2024*
GPA: 3.5/4.0 | **Dean's List:** Fall 2020, Fall 2021 | **Honors:** Binghamton University Scholars Program, Pi Tau Sigma

TECHNICAL SKILLS

Software: Autodesk Inventor, SolidWorks, Creo, Fusion 360, Eagle, Ansys, Finite Element Analysis
Tools & Languages: MATLAB, Python, Microsoft Suite, Microsoft Power BI and Power Apps
Manufacturing: Computer Aided Manufacturing, Welding, Soldering, Machine Shop Tools, CNC, Waterjet

PROFESSIONAL EXPERIENCE

Oishii, *Robotics Engineering Intern* | Jersey City, NJ *May 2022 – Present*
- Design, assemble, and test the hardware, electrical system, and firmware of a custom wheeled robot and robotic beehives
- Enable a 98% assembly time reduction by using Inventor to design or modify robotic systems with Design For Assembly (DFA)
- Develop a new electrical system containing custom PCB's designed in Eagle as well as a custom DC power distribution system
- Program firmware on Arduinos and Raspberry Pi's in addition to using Balena and internal tools for remote deployments
- Ensure on-time delivery of parts within budget by collaborating with multiple vendors to order custom and off the shelf parts

Stryker, *Continuous Improvement Intern* | Mahwah, NJ *May 2023 - August 2023*
- Conceived and implemented customized digital throughput and cycle time tracking solution to enhance production line visibility
- Realized annual savings of over $300,000 through process enhancements within a single manufacturing cell
- Spearheaded two KATA projects to identify and remedy critical capacity bottlenecks, resulting in a 30% boost in throughput
- Developed a comprehensive understanding of pivotal processes and regulatory frameworks in the medical device industry

Make USA, *Process Engineering Intern* | Elmwood Park, NJ *May 2020 - January 2022*
- Analyzed processes and production lines via efficiency analysis to determine areas for improvement
- Created several new processes to streamline operations, and wrote SOP's to ensure the long term success of the changes
- Improved production efficiency and machine usability by designing machine modifications using SolidWorks
- Collaborated with engineering, manufacturing, and quality personnel to determine pertinent quality concerns and solve issues while minimizing machine downtime

PROJECT EXPERIENCE

Senior Design: Mars Rover Wheel, *Technical Lead* | Binghamton, NY *August 2023 - Present*
- Conceptualized senior design project to develop wheels for the Mars Rover in order to meet competition and terrain requirements
- Develop comprehensive engineering design requirements to guarantee the optimal functionality of the final product
- Facilitate weekly progress updates to stakeholders and author the project scope document, defining precise objectives and deliverables for the project

COVID-19 Personal Protective Equipment Manufacturing, *Project Leader* | Teaneck, NJ *April 2020 - August 2020*
- Prototyped low-cost face shield utilizing Fusion 360 which could be easily manufactured for frontline healthcare personnel
- Coordinated material sourcing and distribution to team members, as well as final distribution to frontline healthcare personnel
- Managed project budget, updated key stakeholders, and delivered over 700 low-cost face shields to frontline healthcare personnel during the initial PPE shortage.

LEADERSHIP EXPERIENCE

Binghamton University Mars Rover, *Chief Mechanical Engineer* **|** Binghamton, NY *April 2023- Present*
- Lead a team of 80+ students to design and build a mock Mars Rover to compete in the international University Rover Challenge
- Direct a team of six mid-level managers, each responsible for leading a group of engineers
- Work closely with the Chief Electrical Engineer and the electronics and control teams on the overall rover design
- Oversee the team's business operations including finance, sponsorships, marketing, and Human Resources

Human Robot Environment Interactions Team Lead **|** Binghamton, NY *May 2022- June 2023*
- Planned and led weekly meetings to review CAD models on Fusion 360 and brainstorm solutions for the robotic arm
- Established team-wide mechanical policies, best practices, and conducted information sessions, while also creating and spearheading the mechanical onboarding program, successfully training 20+ new mechanical engineers
- Designed custom large reduction cycloidal gearboxes and participated in design reviews with team leadership and technicians

Human Robot Environment Interactions Team **|** Binghamton, NY *October 2020 – May 2022*
- Collaborated with group members on the design, fabrication, and assembly of the rover's arm and relevant subsystems
- Engineered, fabricated, and assembled the rover's gripper claw, involving multiple significant design iterations

Frisch Robotics Program, *Student President, Program Mentor* | Paramus, NJ *September 2016 - Present*
- Manage robotics program consisting of multiple competition teams by collaborating with faculty, administrators, and advisors
- Grew program from 10 to 60 students as president, and advocate for increased budgets and lab space for growing program
- Returned as a volunteer mentor and advisor after graduation to assist with lesson planning and teaching younger students robotics and engineering, as well as provide administrative advice regarding curriculum, finances, and program structure