**Sarai DeSouza**

sarai.desouza05@gmail.com | (240)-676-1633 | linkedin.com/in/sarai-desouza

**SUMMARY**

B.S. Mechanical Engineering student at MSOE, minoring in Computer Engineering, and member of the honors program. Plans to work in testing or design. Devoting at least 20 hours a week as an MSOE Women’s Soccer player, Secretary of AIAA, Member of MSOE R.A.I.D.E.R.S, NSBE, and MSOE High Powered Rocketry Team.

**EDUCATION**

**B.S. Mechanical Engineering** | Milwaukee School of Engineering | May 2027 | GPA: 3.73

*Relevant Coursework***:** Introduction to Mechanical Engineering, Calculus 1-3, Solid Modeling and Design, Chemistry 1, Honors Seminar 1 and 2, Organizational Psychology, Computer Applications in Engineering, Honors Practicum, Physics 1 and 2, Writing for the STEM Disciplines, Differential Equations, Statics, Digital Logic, Dynamics, Mechanics and Materials, Thermodynamics 1, Circuits for Mechanical Engineering.

**H.S. Diploma** | Eleanor Roosevelt High School | Greenbelt, Maryland | GPA: 4.324 | April 2023

**PROJECT EXPERIENCE**

**6 to 1 Reduction Gearbox for Briggs and Stratton Animal Engine**

***Objective:*** Designed a planetary gearbox with a fixed ring gear using SolidWorks.

***Result:*** Successfully created a custom gearbox casing designed in SolidWorks. Sourced components from McMaster-Carr and Rush Gears, enhancing proficiency in mechanical design and assembly.

**CRL Rocket Design for 2023-2024 Competition**

***Objective:*** Modeled a high powered rocket using SolidWorks and Open Rocket for statewide collegiate rocket competition

***Result:*** The rocket was launched and reached an altitude of over 3,200 feet, demonstrating effective design and collaboration skills in a competitive setting.

**Rover Development Using MATLAB**

***Objective:*** Designed, Modeled, and programmed a rover using an ultrasonic sensor and custom bump sensor for object detection and interaction.

***Result:*** Successfully designed in SolidWorks, built featuring 3D-printed components, and programmed using MATLAB. Efficiently detected, approached, and activated LEDs on contact with objects, showcasing proficiency in programming and robotics.

**TECHNICAL SKILLS**

***Hardware skills:*** Mechatronics, 3D Printing, Level One Rocket Building

***Software Skills:*** SolidWorks, MatLab, VHDL, Simulink, ModelSim-Altera, Quartus, MS Office, OpenRocket, OnShape, TinkerCad

**LEADERSHIP | CO-CURRICULAR INVOLVEMENT | COMMUNITY SERVICE**

**Secretary**| AIAA | September 2023 - Current |

**CRL Rocket Design Team** | MSOE High Powered Rocketry | September 2023 - Current |

**Athlete**  | MSOE Women’s Soccer | August 2023 - Current |

**Member** | R.A.I.D.E.R.S | September 2023 - Current |

**Member**  | NSBE | September 2024 - Current |

**WORK HISTORY**

**Usher/Greeter/Cashier** | AMC Theaters | April 2023 - Current (Seasonal) |

**Phone Ambassador** | MSOE | September 2023 - September 2024 |

**Cashier/Dining Room Attendant** | Raising Canes | July 2024 - Current (Seasonal) |