

Jaiswalaakaar7@gmail.com|6362882020

## Education

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Master of Science in Mechanical Engineering The University of Texas at Dallas	May 2023 GPA: 3.33
Bachelor of Science in Mechanical Engineering The University of Texas at Dallas	May 2021 GPA: 3.33

## Skills

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- Computer Aided Design: CREO and SolidWorks
- Simulation: Finite element analysis, computational fluid dynamics, and topology optimization
- Hardware: Soldering, hand drill, table saw, drill press, Dremel, and 3D Printing
- Software: MATLAB, Arduino, C-programming, Python, ANSYS

## Work Experience

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### University of Texas at Dallas – Dallas, TX Aug 2020 – Aug 2021

- Designed a robotic control system that emulates the forces on offshore wind turbines
- Analyzed and predicted potential failures using finite element analysis (FEA) on aluminum and steel parts and modified the designs as needed which resulted in lower deformations
- Used CREO and created detailed engineering drawings of the parts
- Worked with multiple vendors and ordered parts and actuators which satisfied our motion profile
- Documented and tested electromechanical components and reported the calculated data to the client and came up with an improved design that met the project requirements

### SmartDots LLC – Dallas, TX Jun 2019 – Present

- Designed parts using CREO and provided detailed engineering drawings of the parts and designs which improved manufacturability
- Collaborated with a senior mechanical engineer and designed an electromechanical door for robotic lawnmowers which allowed the robot to travel from yard to back yard
- Created detailed exploded views of the assemblies for demonstration purposes and gained client's approval
- Educated potential customers for Husqvarna robotic lawn mower sales at shows/events and sold 3 lawn mowers

### All Metals Fabricating – Dallas, TX May 2021 – Jun 2021

- Gained an excellent understanding of sheet metal design and fabrication and improved a robotic gate design which resulted in higher sales and positive customer feedback
- Assisted design engineers with CAD
- Created detailed engineering drawings of sheet metal parts

## Projects

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### Designed a 4 Degrees of Freedom Robotic Arm Jun 2020 – Aug 2020

- Reduced cost by 72% through optimization of the weight in the arm
- Researched and sourced off-the-shelf parts which reduced design time
- Created detailed engineering drawings of parts and assemblies by adding dimensions and BOM