Jose Amador - 2022 GEM Fellow
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EDUCATION

Stanford University - Stanford, CA — Expected Graduation: 2024
MS - Mechanical Engineering w/ Robotics & Kinematics Concentration
Northwestern University - Evanston, IL - 2018-2022 — GPA - 3.899/4.0, Cum Laude honors
BS - Mechanical Engineering w/ Robotics Concentration — Minor - Computer Science

PROJECTS

Mechanical Engineering Independent Study — **Summer 2020**

Four-Wheel Drive Conversion

- Converted Baja SAE powertrain system from two-wheel to four-wheel drive and decreased weight by approximately 35 lbs while maintaining a minimum 1.5 factor of safety for all components
- Designed and manufactured a single-stage gearbox using American Gear Manufacturing Association methods to prevent contact stress and bending stress failure modes

Baja SAE - Northwestern — **2019-2020 School Year**

A-Arms

- Designed and manufactured suspension component to convert Baja car from 2WD to 4WD and validated design through off-road vehicle testing
- Used SolidWorks finite element analysis to optimize strength and weight with specific load cases and crash scenarios ultimately increasing factor of safety to 1.3

EXPERIENCE

Johnson & Johnson Vision - Milpitas, CA — **Summer 2022**

Mechanical R&D Intern

- Designed+prototyped optomechanical system to allow tip and tilt of lens used in excimer laser system
- Used SolidWorks/COMSOL finite element analysis to guide frame design, structure, and material choice to meet requirements while accounting for input from service, industrial design, and electrical teams

Shure Incorporated - Niles, IL — **Summer 2021**

Process Engineering Intern

- Designed/conducted a process capability study to reduce adhesive curing time from 90 mins to 25 mins
- Learned main manufacturing processes/machines to create instructional documents to enable anyone to use a machine in <1 hour and applied this knowledge to construct prototypes for project management

LEADERSHIP

Baja SAE — **2021 - 2022 School Year**

Chief Engineer

- Apply mechanical engineering principles and understanding of the car to review and manage the projects of all 35+ members on the team ensuring compliance with all official rules
- Coordinated with other high level leaders to set the vision, goals, and values of the team and created standards for which parts were to be modeled by and required load cases for the parts to sustain

SKILLS

Computer: SolidWorks, Siemens NX, ANSYS, Abaqus, COMSOL, Finite element analysis, Word, Excel
Programming: Python, Java, C++, C, MATLAB, LabVIEW
Manufacturing: Haas CNC, TIG welding, conversational mill, lathe, waterjet, laser cutter, 3D printing