Yashar Sadaghiyani

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EDUCATION

University of Michigan, *Mechanical and Electrical Engineering*

September 2018 - (Expected) May 2022

- GPA: 3.8/4.0, Dean's List, University Honors
- Manufacturing Concentration

PROFESSIONAL EXPERIENCE

Tesla Inc, *Vehicle Engineering Intern – Center Console Design*

January 2020 – August 2020

- Designed (CatiaV5) and kicked off tooling for push-push deploying cupholder mechanism, saving $12 piece price ($600,000 annually).
- Troubleshot, designed, and kicked off tooling for charger mechanism using cyclic testing/SLS prints to solve durability/craftsmanship specifications.
- Selected materials to meet dimensional stability, a-surface, and manufacturing requirements for load bearing/aesthetics parts of console.
- Modified plastic components and mold flow processes (gate location and type) to meet injection molding capabilities based on mold flow analysis.
- Solved volume, tolerance stack up, and assembly requirements by tightly packaging cupholder with other assemblies in the console.
- Maximized durability of console throughout lifespan of product by performing DFMEA and creating abuse loading targets.

EXTRA-CURRICULAR ACTIVITES

Formula SAE Electric Team, *Vehicle Dynamics and Chassis Engineer*

September 2018 - Present

- Modeled (Siemens NX) welding setup/jigs for chassis to minimize tolerances from welding process and manufacturing time.
- Simulated FEA (ANSYS) of chassis and suspension components to exact safety factors for lightweighting purposes.
- Spearheaded R&D projects – measuring suspension/tire loads and chassis torsional stiffness rig – to validate simulation data/safety factors.
- Fabricated suspension system using mills, lathes, and CNC machines to finish chassis for competition (2nd place EV).

PERSONAL PROJECTS

3D Printing

- Created (SolidWorks) household items - chess set, vise, desk organizer - and printed using FDM (modeled with Cura).
- Maximized rigidity while minimizing print time/weight by iterating infill type, print orientation, and shell wall thickness.

Underwater Vehicle Design

- Developed and manufactured remotely operated underwater vehicle prototype to inspect BP's marine oil infrastructure.
- Designed translating thruster to increase mobility for competition (1st place).

SKILLS

DESIGN

CATIA V5 | Siemens NX

SolidWorks (CSWA)

DFM | DFA | DFMEA

Ultimaker Cura

FEA

ANSYS | MSC Adams

CATIA FAX Workbench

FABRICATION

SLS | SLA | FDM

Injection Molding

Mill | Lathe | CNC

Laser Cutting | Water Jet

Powder Coating/Baking

GD&T | Drafting

WELDING

TIG Welding | Soldering

Ultra-Sonic Welding

Plasma Cutting

PROGRAMMING

C++ | MATLAB

LANGUAGES

English | Farsi

PHOTO EDITING

Adobe Suite Photoshop

AWARDS

William Branstrom Prize

Awarded to college of engineering freshman placing in 95th percentile.

AFFILIATIONS

Society of Automotive Engineers

American Society of Mechanical Engineers

FIRST Robotics