

# Jaydeep Shelke

## Education:

Master's in Automotive Engineering, Lawrence Technological University, 2019

Bachelor's in Mechanical Engineering, Sinhgad Academy of Engineering, 2016

## Relevant Project Experience

### **Engineer, Cardinal Compliance Consultants (2020- Present)**

Specializes in lockout tagout machine specific procedure creation and data collection.

### **Project Engineer, Hill Machine Works LLC (2019-2020)**

Conceptualized and crafter proposals for custom manufacturing equipment. Created 3D CAD models and 2D drawings for components and assemblies of custom tooling. Improved manufacturing process by identifying bottlenecks and applying the lean manufacturing principals. Created and implemented process flow chart, FMEA, control plan, design of experiment, Kanban and poke-yoke for new launch process considering the budgetary restrictions. Involved in maintaining and applying ISO 9001 clauses. Created work orders, routing sheet, inspection for sheet for plant floor associates. Drafted and improved plant layout. Created and maintained spare parts list, preventative maintenance plan and bill of material. Participated in continuous improvements, customer audits and brainstorming activities.

### **Design Engineer, TSS LLC (2018-2019)**

Compiled and furnished necessary information to document the design solution required for building or parts components and adoption of the design. Produced computer generated drawings and documents of company products. Lead various product development activities including the development of pay station, booth and canopy. Created and maintained the documents such as BOM, installation and replacement/repairing manuals. Standardized the manufacturing processes by cycle time calculation and applying six sigma principles. Improved and revised previous engineering drawings to reduce production cost and cycle time. Carried out technical support activities by performing root cause analysis for customer specific issues. Introduced and organized training sessions for new CRM software to sales team. Involved in plant layout changes and continuous improvement activities.

### **Student Assistant, Lawrence Technological University (2018)**

Assisted in training staff in managing game day arrangements. Organized refreshments for football and soccer players.

## Skills:

- Automotive mechanical systems
- Computational fluid dynamics (1 year)
- Labview (less than 1 year)
- Fluid dynamics (1 year)
- Pro-e (less than 1 year)
- Solidworks (2 years)
- Ansys (1 year)
- Mastercam (less than 1 year)
- Matlab (1 year)
- Drill press (1 year)
- Lathe (1 year)
- Machining (2 years)
- Creo (less than 1 year)
- Minitab (less than 1 year)
- Autocad (less than 1 year)
- Dynamics (less than 1 year)
- CAD (3 years)
- Autodesk Inventor (less than 1 year)
- Engineer (4 years)
- Drafting (1 year)
- Mechanical design (3 years)
- Project Management (2 years)
- FEA (less than 1 year)
- Autodesk
- CNC
- Microsoft Project (less than 1 year)
- Basecamp (less than 1 year)
- APQP
- ISO 9001
- PPAP
- Manufacturing
- Mechanical Engineer
- Six sigma
- Product Development
- Project Engineering

## Relevant Project Experience

### **Academic Projects, Lawrence Technological University (2017-2019)**

Advanced computational fluid dynamics (air flow analysis around simple car model) Created suitable CFD domain and mesh; computed horizontal and vertical forces on the car. Introduced a spoiler onto the car body to improve the handling and efficiency for highway and city conditions. Developed an excel program for calculating roll angles, tire vertical forces, understeer gradient and slip angles. Diagnosed the problem, conducted benchmarking, redesigned the drum brakes, reanalyzed the brakes.

### **Design Engineering Intern, ZDR Inc (2018)**

Studied global dimensions and tolerances and CAD drafting. Designed and developed CAD models of new medical devices and equipment. Incorporated the changes suggested by president. Developed 3D printed models of CAD models using Makerbot. Researched about material used in production of the product.

### **Braking and Steering Systems Lead, SAE Supermileage (2018)**

Determined center of gravity mass to determine if the design will tip during 20-degree tilt test. Calculated turning radius of the vehicle so it can navigate through half circle and slalom test track. Performed finite element analysis for wheel brackets. Calculated the distance that can be travelled by car after applying brakes while traveling at 15mph. Fabricated the steering and braking mechanism and installed electrical connections.

### **Body Design Lead, SAE Supermileage (2017-2018)**

Designed streamlined car body with only 0.04 drag coefficient. Tested the designed car body using Ansys Fluent and Wind Tunnel. Fabricated the carbon fiber body smoothing the mold surfaces, laying down the carbon fiber layers, vacuum bagging the mold and curing the mold at 86-degrees Fahrenheit for 6 hours.

### **Senior Year Project, M & G Engineers (2015-2016)**

Designed shell and tube heat exchanger as an evaporator for cooling load of 6000kcal/hr. using Kern's method. Researched options for best refrigerant to use in the refrigeration system of water chillers. Selected plate heat exchanger from SWEP company catalogue for a cooling load of 6000kcal. Conducted experiment on shell and tube heat exchanger installed as an evaporator.