



## Sagar Bajaj

Industrial and Systems Engineer

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Industrial Engineer pursuing a master's degree in Industrial and Systems Engineering, with two years of work experience in continuous improvement, lean manufacturing and Lean Six Sigma. Aiming to leverage a proven knowledge of project management, productivity improvement, and just-in-time skills to successfully fill within an Engineering role.

### EDUCATION

Oakland University August 2019 - Present  
M.S in Industrial and Systems Engineering

Sinhgad Academy of Engineering June 2012 - May 2016  
B.E in Mechanical Engineering

### SKILLS

- Certified Lean Six Sigma Green Belt.
- Project Management, Quality Control, Microsoft Office, Minitab, Product Design, Lean Manufacturing, TPS, 5S, Kanban, Kaizen, SLP, APQP, FMEA, DFMEA, PFMEA, FEA, DOE, PDCA, Agile and Waterfall project management methodologies, Process Flow, Value Stream Mapping, Root Cause Analysis, DMAIC, Yamazumi Chart, Voice of Customer.
- Design and Simulation Software: AutoCAD, Catia, Creo, GD&T, Ansys, Lindo, Minitab, SolidWorks, MATLAB, CAD.

### EXPERIENCE

**Royal Micro Irrigation Systems** October 2016 - May 2018  
*Industrial Engineer and AutoCAD Designer*

- Analyzed farm requirements and provide efficient and economic irrigation design solutions to different clients using AutoCAD and SolidWorks.
- Utilized project management tools (GANTT Chart and MS Project) to establish timelines, build action item lists and assigning responsibility along with completion dates and achieving the milestone.
- Prepared project documentation with technical specifications, bill of materials (BOM).
- Assisted the Continuous Improvement Team in establishing annual objectives and personal development plans.

**N.L Packaging Private Limited** July 2016 - October 2016  
*Manufacturing Engineering Intern*

- Worked with a team in Implementing the Just-in-Time (JIT) strategy to optimize production system and lower warehouse costs by 12%.
- Worked with GD&T engineer incorporating mutual decisions regarding data verification reducing verification time by 7%. Utilization of continuous improvement methodologies such as lean management, Six Sigma, DO IT RIGHT and 5S to enhance manufacturing quality, reliability, and cost-effectiveness reducing waste by 3%.
- Worked on the manufacturing of the flexible packaging materials and different quality processes embedded in the manufacturing.
- Assisted the team in applying design for manufacturing (DFM) techniques to product design.
- Continuous improvement of the fabrication process to effectively utilize the equipment and maximize production along with product quality.

**Formula SAE**

June 2015 - July 2016

*Team Member*

- Powertrain Design: designed lightweight powertrain system, chassis, seat and steering wheel utilizing SolidWorks and AutoCAD. Maintained APQP consigned time plan for all phases of APQP Design, development, verification and validation.
- Analysis and Manufacturing: Utilized Ansys software to analyze powertrain components. Applied DFMEA to identify risks of car components design changes and PFMEA for final design check for risks and possible errors from various sources such as manufacturing tools, environment and manpower. Manufactured carbon fiber drive shaft using a filament welding technique.
- Welding: Manufactured carbon fiber driveshaft using a filament welding technique. Manually welded chassis, seat and steering wheel components utilizing tools such as shielded metal arc welding, metal inert gas and tungsten inert gas welding.

**WMU Catering**

August 2018 - August 2019

*Experienced Trainee*

- Recommended and implemented bi-monthly training sessions for student employees as an effective continuous improvement measure
- Established Standard Operating Procedures.
- Implemented the Just In Time Methodology for Inventory Management.

**Compass Group**

September 2019 - Present

*Attendant Catering*

Applied office TPM rule and 5S rule for the to-go food order reducing delivery time by 20%.

**PROJECTS****Catapult Project**

March 2019 - April 2019

- Developed a five-factorial design of catapult to determine the maximum distance travelled by the projectile.
- Identified nuisance factors that affected the response variable of the system and analyzed the output of experiments using Minitab Software to perform ANOVA and find significant factors.
- Verified the response value obtained using Regression Analysis.

**Text neck and stresses caused in neck during the use of smartphone and tablet**

November 2018 - December 2018

- Analyzed if there are stresses occurring in particular neck muscles (trapezius and sternocleidomastoid) while using mobile phones and tablets at different postures using Electromyography and EMG software.
- Examined the Electromyography readings in Microsoft Excel by RMS method in order to determine MVC.
- Worked on Minitab software to perform ANOVA for statistical analysis and compared the stresses induced on neck muscle at different postures.

**Automobile Theft Prevention Using 3D Gesture with GPS**

June 2016 - October 2016

- Researched security needs for preventing automobile theft. Created a 3D gesture key fob for security to unlock the vehicle.

**Forced Convection Solar Dryer**

November 2015 - January 2016

- Designed a wooden-based efficient 'Forced Convection Solar Dryer' which provided the same efficiency as other materials such as steel to dry crops but at 25-30% cheaper cost.
- Incorporated a glass frame with an insulation coil which reduced drying time by 50% compared to open drying in the sun.
- Used the Agile Project Management method before initiating the project.

**Leaf Spring Seminar**

April 2015

- Researched and compared Composite Leaf Spring and Conventional Leaf Spring and presented a seminar on the same.
- Learned how Composite Leaf Springs are analyzed using Finite Element Analysis.
- Analyzed that Composite Leaf Spring is lighter and more economical than Conventional Leaf Spring.