

# AKSHAY ARJUN GHADGE

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## Professional Summary:

Completed master's in Mechanical Engineering with competence in Manufacturing, Design. three and half year experience in CAD/CAE, 3D Solid and Surface Modeling, Six Sigma. Seeking position in Mechanical Design Engineering or Process Engineering.

## Educational Qualification:

- Illinois Institute of Technology, Chicago, IL. May 2019  
Master's in Manufacturing Engineering Mechanical GPA: 3.6/4
- Walchand Institute of Technology, Solapur, MH, India. June 2015  
Bachelor's in Mechanical Engineering. GPA: 3.5/4

## Certification:

**Certified SolidWorks 2019 Essential Training.** Certification No: Ac5Ys1TOjs8WOAcGBMbh3doFCWMD  
**SolidEdge Certification. (SIEMENS).** Certification No: UC-JOF1W11S  
**Six Sigma Green Belt. (CSSGB).** Certification No: 3GWD8FGDKB86

## Technical Skills:

**Engineering Design Tools:** Six Sigma, DFSS, DFMEA, GD&T, PDM, BOM, CAD, CAM, CAE, DFM, DFA, FEA, Static Structural Analysis, Dynamic Analysis, Thermal Analysis, Modal Analysis, Design Optimization.

**Engineering Software:** SolidWorks, CATIA, NX, Creo, AutoCAD, MATLAB, Ansys Workbench, Abaqus, Microsoft Excel, Word, PowerPoint, C++, Minitab, SQL.

**Quality:** APQP, PPAP, ISO 9001, SPC, Gage R&R, FMEA, Hypothesis tests, Regression, Supplier Deviations.

## Professional Experience:

**Sigmatron International Limited. Chicago, IL, USA.**

[Sep' 19- July' 22]

### **Quality and Process Engineer:**

- Process Preparation and Maintenance.
  - Designed and Developed PCB (circuit Boards) in production processes for Sigmatron International Limited.
  - Prepared **DFMEA** for PCB Board assembly drawings, Assembly components (Mechanical and Electrical) modeled (3D) with Blueprint reading and old 2D drawing files.
  - Written assembly procedures, procurement support to Different cross functional teams like documentation control and purchase department.
  - Modeled design component parts for different assembly fixtures with use of **AutoCAD 2018** and get them manufactured from different vendors.
  - Analyzed and studied Customer requirement Changes and proposed new design ideas.
  - Assist with providing business justification on buying new equipment/new projects considering product cost , lead time and performance.
- Manage Supplier Quality.
  - Handling all supplier PPAP document submission.
  - Handling CAR for all suppliers/clients.
  - Coordinate with material buyers and suppliers to perform periodic audits to ensure they meet quality standards and requirements.
- Developing and documenting PPAP activities, Participate in APQP for new product launch.
- Developing and documenting FMEA, control plan for production work to ensure all requirements are met.
- Leading Continuous Improvement projects to machine capabilities, Processes and documentation.

## **Tata Consultancy Services.**

[Mar' 16- Jan'17]

### **Mechanical Design Engineer**

- Designed and Developed robust designs for new, special or existing products for different clients such as Mahindra Navistar Engines.
- Prepared **FMEA** studies for different assemblies and their processes . Engine components (Mechanical ) modeled (3D) with Blueprint reading and old 2D drawing files.
- Written test and assembly procedures, procurement support to different cross functional teams.
- Prepare using 2D (**AutoCAD**) and 3D (**Solidworks**) CAD software mechanical drawings, detailed drawings complete with calculated Dimensions, tolerances and BOM, Thermal and structural analysis with **ANSYS**.
- Revise and alter detailed and layout drawings to confirm engineering changes, prepare engineering change requests.

## **Shree Engineering Works.**

[Mar' 14- Jun' 14]

### **Manufacturing Engineer Intern**

- Performed on processes involving manufacturing of railway parts ex. Rollers, roof of Compartments and Bearings.
- Monitored processes on Lathe, VMC. Achieved command in machine code languages used for CNC.
- Implemented 5S Program in warehouses, utilized space by 10% resulting factory clean and risk free.
- Utilized procedures with **Kanban** system to reduce excess inventory by 15 % and increase capital at plant level, traced value stream map to identify bottlenecks in processes.

## **Academic Projects:**

### **Go - Kart upright strength analysis**

[Dec 18- May' 19]

- Designed 3D models Upright disc, wheel hub assembly and Nut-Bolts with help of **Solidworks** and completed Both static and dynamic Analysis in **Abaqus**. Completed Both static and dynamic Analysis done some topology optimization in **INSPIRE**.

### **Reduction in Response Time for Natural Disaster Rescue with Six Sigma Methodology**

[Dec' 18- Feb' 19]

- Using the **DMAIC** roadmap optimized the overall process of responding, evacuating victims and reducing the supply time.
- Tools such as **SIPOC** Diagram, data analysis with **Design of Experiments**, Swim Line map, Process map, Null & Alternate
- Improvement and Control plans were laid for increasing supplies capacity, inventory management and minimizing breakdown.

### **Finite Element Analysis of Baseball Bat**

[Feb' 18- may' 18]

- Studied Static, Transient and Modal analysis. Worked on **DOE** and Direct Topology optimization in **Ansys Workbench 19.0**.

### **Performance Study of Stock Prices Using Statistical Tools**

[Dec' 17- Feb' 18]

- Proactively monitored and collected data of stock prices for selected periods.
- Plotted **Shewhart charts** and **EWMA charts** in Phase I & II to monitor the performance and detect any abnormality in process
- By observing trend lines and process capability parameters.

### **Engine Head Cover Modelling and 3D Printing**

[Aug' 17- Dec' 17]

- Managed group of Six people to design the Engine head cover in Creo parametric 4.0. Used part files to make a prototype in a 3D printer.

### **Propelling Tricycle Using Steering Column**

[Aug' 14- may' 15]

- Developed a tricycle design model in **Catia V5** for disabled people.
- Purchased parts using cost effective analysis and worked on Welding and assembly of Tricycle.