

AMAN MAHAJAN
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OBJECTIVE

Seeking a full time position in mechanical engineering with a special interest in Mechanical Design and Structures.

EDUCATION

Master of Science in Mechanical Engineering, (December 2012)

North Carolina State University, Raleigh, NC

GPA 4.00

Bachelor of Engineering (B.E.) in Mechanical Engineering, (May 2010)

Manipal University, Manipal, Karnataka, India

CGPA 9.53/10.0, First position in class.

Related Courses: Mechanical Design, Finite Element Analysis, Fracture Mechanics, Mechanical Design Engineering, Mechanical Design for Automated Assembly, Advanced Solid Mechanics

EXPERIENCE

Maruti Suzuki India Limited, Gurgaon, Haryana, India

Intern in the Automation Lab, January 2010 - May 2010

- Studied the assembly line to look for tardy tasks and developed a strut lifting machine using SolidEdge that made use of pneumatic cylinders for gripping and lifting the automobile strut that reduced the assembly time and worker fatigue thus improving the line efficiency.
- The side body transfer system, used to lift the side body from the pallets and move it to the main line in the weld shop was slow and not rigid leading to swaying and dents in the body therefore it needed redesign that was done on SolidEdge. The new system includes both mechanical and electrical equipment (pneumatic cylinders & electric motors), runs faster and provides a stable service.

Maruti Suzuki India Limited, Gurgaon, Haryana, India

Intern in the Quality Assurance Department, June 2008 - July 2008

- Made use of the Eddy current dynamometer to check the power-torque characteristics of production engines. The experiment involved study of all the sensors present in an I.C. Engine to better understand the process.
- Using a chassis dynamometer, carried out the emission testing of vehicles by driving them on the rolls of the dynamometer.

North Carolina State University, Raleigh, NC, USA

- Completed a project under Dr. Tiegang Fang, Professor, Department of Mechanical & Aerospace Engineering for the design of an optical window for a combustion chamber using Solidworks for the design and Ansys for the analysis.
- Pursuing a project under Dr. Gracious Ngaile to develop a new bolting system by analyzing the stresses in ANSYS.

Machine Shop experience

- As part of undergraduate curriculum, finished a project by working on the engine lathe by carrying out turning, threading, knurling, taper turning operations.
- Fabricated a structure using arc welding.
- Prepared small components having high quality surface finish using grinding machines.

In-depth design of I.C. Engine components

- Following mechanical design procedures, designed piston, cylinder liner, connecting rod, crankshaft of an I.C. engine.

Stress Analysis of I.C. Engine cylinder liner

- Carried out finite element analysis of the cylinder liner for an internal combustion engine using ANSYS.

Fracture Mechanics on aircraft wing

- Using the principles of fracture mechanics, predicted the number of flights it would take an aircraft to develop cracks that are hazardous for further operation.

CERTIFICATIONS

- CATIA
- ANSYS

SKILLS

Computer: AutoCAD, CATIA, Pro Engineer, Ansys, SolidEdge ST, NX (Unigraphics), SolidWorks, MS Office

Language: Fluent in English, Hindi, Punjabi.

LEADERSHIP

- Part of student council in high school.
- Taught Engineering Graphics in evening classes to incoming freshmen.
- Treasurer of YUVA, Indian student organization at North Carolina State University.
- Member of the CAD team of ECOCAR2, an inter-university competition organized by GM to modify one of its vehicles in to a hybrid design.

HONORS

- Awarded Gold Medal by Manipal University for securing 1st position in Mechanical Engineering class of 2010.

HOBBIES & INTERESTS

Travelling, Listening to music, Following Formula One and Cricket, Playing badminton, Cooking