

ABHISHEK RAJ URS K N

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OBJECTIVE

Seeking career opportunities to apply and improve myself in the field of Mechanical and Aerospace Engineering.

EDUCATIONAL QUALIFICATION

University of Texas at Arlington

Master of Science

Mechanical Engineering

GPA: 3.2

Arlington, TX

August 2013 – August 2015

Visveswaraya Technological University

Bachelor of Engineering

Mechanical Engineering

GPA: 3.5

Bangalore, India

September 2008 – July 2012

TECHNICAL SKILLS

Tools and Software: CAED/CAMD, CATIA v5, Solid Works, ANSYS v12, Auto Cad, Solid Edge, Pro/E, Optimum K, MS office.

Fab Lab : Adobe Illustrator, Corel Draw, Adobe Photoshop, Catalyst EX, Cube, Repetier-Host.

Languages : MATLAB, C.

Hardware : CNC Machines, Machining, Soldering Gun, 3D printers, 3D scanners, Laser cutter, Vinyl cutter, Oculus Rift.

Thesis

Affect of device level modeling on system level thermal predictions.

(Jan 2015 - present)

Modeled an Insulated gate bipolar transistor attached to a cold plate and performed thermal analysis. Initially it was analyzed assuming uniform heat flux to obtain the cold plate temperatures. In the second approach, detailed die level analysis was carried out and compared to measure the difference in performance.

EXPERIENCE

• Bosch Ltd, Bangalore, India.

(Jan 2012 - June 2012)

Job Title: Mechanical Engineering Project Intern

Job Description: First Pass Yield Improvements in Element Assembly used in Diesel Fuel Injection Pumps: Measured the amount of rejections and rework in the process of manufacturing Element Barrel and Plunger. Implemented new methods in the existing process to increase the yield of Element Barrel and Plunger and decreased the percentage of defects in a particular batch of Elements by using quality tools like Pareto Analysis, Control Charts, Ishikawa Diagram, Flow Charts.

• University Libraries, University of Texas at Arlington

(September 2014 - Present)

Job Title: Fab Lab Student Associate

Job Description: Mentor university students on functionality and troubleshooting of various 3D printers, milling machines, 3D scanners, laser cutter, vinyl cutter, Oculus Rift, and electrical workstations. Managed the overall operations, inventory and helped establish the lab during its beta stage with policies, strategies and set ups. Guide students to prototype their ideas into models using 3D modeling software SolidWorks, AutoCad, Expose students to the various new technologies by exhibiting various simple projects.

CERTIFICATIONS

- Completed a training program on Basic Hydraulics and Pneumatics at Bosch Rexroth center of competence in Automation and Technology organized by Visveswaraya Technological University, Karnataka, India.
- Participated in Swarm Robotics Workshop conducted by Think Labs, SINE IIT Bombay at National Institute of Technology Suratkal [NITK].
- Completed a Centre for Continuing Education (CCE) Proficiency course at Indian Institute of Science [IISc], Bangalore, under the guidance of Research Scientist Dr. S B Kandagal.

GRADUATE PROJECTS

• SCCA F600 Race Car: Review, Design, Analysis and Fabrication

Reviewed the old design and implemented new modifications to the suspension systems with respect to A Arms used in Front Suspension. Designing Pedal box, Pedal box Adjuster to help the driver move the pedal box to his comfort, design of Rear Suspension, also verified the hard points are similar in Solid Works and in Optimum K.. Designed the Body for the F600 car and carried out the Aerodynamic analysis on it to make sure the required goals were met. The entire design was implemented in Solid Works.

• Magnetic fluids (Ferro-fluids):

Simple experiment to demonstrate how to prepare a Ferro-fluid and its applications in the field of Nano-Fluidics. A Ferro-fluid core transformer was fabricated and its performance was compared to a conventional solid core transformer. Also, applications in Ferro-fluid lithography.

• Design and Analysis of a Single Cylinder Engine Crank Shaft:

Design of the Single Cylinder Engine Crank Shaft was done in CATIA Design environment. Analysis was carried out in ANSYS using Finite Element Method to compare various materials and to determine the effect of various stresses acting on the Crank Shaft.

• "G" Suits for Astronauts: Concepts of Design and Details:

A Technical exercise on process of Design and Manufacturing of a Typical 'G' suit, raw materials required, and most common problems faced by Astronauts.

• Vortex Induced Oscillations:

A Case study of Tacoma Narrows Bridge catastrophe, study of vortices in real world, gained theoretical exposure to the velocity distribution, flow induced vibrations, regimes of external flow, and profile drag. Studied and analyzed the difference between galloping and VIV along with the Dependency of Reynolds number on VIV.

• Shock-Shock Interaction (Double Ramp Problem):

Studied and tabulated the values of Mach number, pressure and flow angles after every shock formed over the given geometry using Mat lab. The results were plotted on a pressure deflection diagram.