

RAJIV SHARMA

Think Different, Do Different_Multi Talented, Easy Approach

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CREATIVE ENGINEER_MECHANICAL_MAINTENANCE | DESIGNER | INVENTOR | RESEARCHER | LECTURER

To be placed in an organization in which I can use my technical skills and leadership qualities to the upliftment of the organization and personal growth

EDUCATION

Aug 2010-Aug 2013 **Lovely Professional University** Phagwara, India

B-Tech/ B.Eng. in Mechanical Engineering | GPA 8.39/10

Subjects- *Object Oriented Programming, Engineering Thermodynamics, Fluid Mechanics, Engineering Mathematics-I & II, Mechanics, Physics Lab || Communication Skills-II, General Presentation, Mechanics of Solids, Kinematics of Machines, Engineering Thermodynamics Laboratory, Fluid Mechanics Laboratory, Waves Electricity and Magnetism || Electrical Sciences-I, Material Science, Design of Machine Elements-I, Heat and Mass Transfer, Dynamics of Machines, Kinematics and Dynamics of Machines Laboratory || Electrical Sciences- II & its Laboratory, Energy Conversion Systems, Design of Machine Elements- II & its Laboratory (CAD), Controls Theory, IC Engine and Heat Transfer Laboratory, Numerical Analysis & its Practical Lab || Refrigeration and Air Conditioning, Seminar on Industrial Training, Mechanical Vibration, RAC and Turbo Machinery Laboratory, Non-Traditional Machining Processes, Operation Research, Capstone Project-I & II, Engineering Materials || Quality Engineering, Power Plant Technology, Mechanical Vibrations and Controls Laboratory, Computer Aided Manufacturing & its Practical Lab, Advanced Welding Technology*

May 2007-May 2010 **Research & Development Polytechnic College** Ludhiana, India

Three-year polytechnic diploma in Mechanical Engineering | Per. 76.12%

Subjects- *English & Communication Skills- I & II, Applied Mathematics- I & II, Applied Chemistry- I & II, Engineering Drawing- I & II, General Workshop Practice- I & II, Applied Physics- I & II, Basics of Information Technology || Mechanical Engineering Drawing- I & II, Computer Applications in Mechanical Engineering, Elements of Electrical & Electronics Eng, Workshop Technology- I & II & III, Material Science, Applied Mechanics || Generic Skills & Entrepreneurship Development, Hydraulics & Pneumatics, Thermodynamics- I & II, Strength of Materials || Theory of Machines, Automobile Engineering, Production Management, Computer Aided Drafting (AutoCAD), Industrial Training, Basics of Management, Metrology & Instrumentation, Machine Design, Refrigeration & Air-conditioning, CNC Machines & Automation, Major Project*

Mar-2007 **S.M. High School** Ludhiana, India

High School Diploma | Per.65%

Worked part-time during the school year as well as every summer season in order to finance my education

EXPERIENCE

Creative Engineer at Project [RESEARCH & ME | mechscinnovate] Aug, 2008-Aug, 2015-Present

I am Creative Engineer, Researcher, Inventor, Designer and Author at RESEARCH & ME_mechscinnovate which is my creativity, research, innovations and design based blog. I am here presenting creativity in science-engineering & helping to innovate, design and research. The approach is changing the art of developing innovation, research and design. For details please visit, research-andme.com | [Instagram/mechscinnovate](https://www.instagram.com/mechscinnovate) | contest.techbriefs.com/profile?user=55809

Maintenance Engineer at Auto Parts Manufacturing Industry, Ludhiana, India Dec, 2014-Present

Performing maintenance engineer role for CNC Turning, VMC, Cutting Band Saw, Hobbing, CNC Hobbing, Gear Shaving, Gear Shaper, Vertical Broach, Center Facing, Forging Drop Hammer, Mechanical Press, Upsetter, Hydraulic Press, Spline Milling, Induction Heater, Seal Quench Furnace, Lathe, Boring, Drilling, Deep Hole Drilling, Milling, Grinder, CNC Grinder, Billet Heater, Magnaflux, Shot Peening & Blasting, Spline Rolling, Normalizing Furnace, Tempering Furnace, Reciprocating & Rotary Screw Air Compressor, Refrigerated Air Dryers, Handling Air-line in plant, Cooling Tower, Heat Exchanger, Panel, Split & Window A.C., Fork Lifter, Hydra Crane, Jib Crane, EOT Crane

- | Attending day to day breakdowns, work allotment, manpower management, job work, fabrication-welding work, material arrangement and follow up for aforementioned machines
- | Responsible in installation and shifting of new and current machines, equipment
- | Planning and control of soft water plant charging, DM water plant charging
- | Familiar with Sewage Treatment Plant process
- | Handling internal maintenance audit process as per the requirement of ISO/TS 16949, 14001
- | Planning and implementation of root cause analysis, preventive, corrective, predictive maintenance, 5S system, machine modification, machine technology up-gradation
- | Maintaining audit documentation
- | Handling utility services in the plant

- | Familiar with hydraulic and pneumatic circuits
- | Data collection, acquisition and analysis
- | Familiar with machinery breakdown insurance claim process

Social Worker, Ludhiana, India

Dec, 2014-Present

To find barriers and challenges in the development of industry

Lecturer at Lovely Professional University, Phagwara, India

Aug 2013-May2014

Instructed a diverse student population at school of polytechnic while teaching engineering to 1st through 6th semester students

- | Applied active learning techniques while motivating students to participate in class activities and open themselves to learning
- | Implemented positive classroom management strategies to encourage proper behavior and respect for others
- | Utilized planning and organizational skills in carrying out classroom support activities including completing interesting and thorough chapter plans as well as preparing test materials and monitoring testing
- | Earned the lecturer's respect for my true concern for the students, willingness to tackle hard assignments, and ability to follow through on any project taken on
- | Displayed creativity and initiative in the development of informative bulletin boards
- | Known for my dedication to providing high quality academic service, was entrusted with training some weak students and setting an example for them to follow

Intern at International Tractors Ltd., Hoshiarpur, India

May 2012-July 2014

Learnt & familiar with the Tractor parts manufacturing, assembly, processes, machinery and manpower working at each stage in the plant to produce tractors

Intern at OSHO FORGE LTD, Ludhiana, India

May 2009-July 2009

Learnt & familiar with auto-parts forging, machining, heat treatment, processes, machinery and manpower working at each stage in the plant to produce auto-parts

TECHNICAL SKILLS

Environments: Windows XP/Vista/7/8/10, Mac OS, Android, iOS

Software : Microsoft Office 2003-07-10-13-16, Paint.Net, Picasa, Sketchbook etc.

offer an ability to rapidly master new software and operating systems

CAD: Auto-CAD, Pro-E, CATIA, Solid Works, PTC Creo, Hand Drafting

Languages : CNC & VMC programming, Basics in C++

Web Design: Managing www.research-andme.com

Machining: Familiar with manual machine tools – CNC machines for auto parts manufacturing

Manufacturing: Familiar with processes like forging, gear cutting, machining, cutting, broaching, heat treatment, Tractor & Car assembly...

AWARDS & HONOURS

2016	Qualified in Tech Briefs @NASA 'Create The Future Design Content 2016'	May 2010	188th Rank in SLIET SET 2010
		May 2010	First position in Diploma (Mech. Eng.) with Honors
2015	Qualified in Tech Briefs @NASA 'Create The Future Design Content 2015'	Apr 2010	Selected as R&D Engineer Masruti Suzuki
Apr 2014	First prize in ' Engineering Expo 2014 Lovely Professional University '	May 2009	Secured position as ' Class Representative '
Aug 2013	First position in B-Tech (Mech. Eng.)	May 2007	All India JET Rank 2312
June 2010	Successfully secured admission in DAVIET under PTU Counselling	May 2006- Dec 2007	Secured position as ' Head Boy '
		Mar 2005	'Best student of the class' position

WORKSHOPS / CERTIFICATIONS/ SEMINARS

Sep, 2009	All India Machine Tool exhibition		industrial assets responsible for production
Dec, 2008	Familiar with Design department, CMM, CNC turning and CNC VMC, advanced machine tools	June, 2008	Co-relate material properties by using metallography
Dec, 2008	Relationship b/w machinery, Tool-Dies,	June, 2008	Familiar with testing parameters of a bicycle

EXTRA CURRICULAR ACTIVITIES

Nov 20-21, 2014	Delegate in Knowledge expo	Jan 2007	Painter in 'Inter School Drawing & Sports Competition' at Guru Nanak Stadium Ludhiana
Nov 18-19, 2014	Delegate in Indo- U.S. Technology summit		
Nov 13-14, 2014	Visitor in FICCI R & D global summit	Nov 2006	Bhangra in 'Inter school Bhangra & Dance Competition' at P.S.E.B, India
Sep 26, 2014	Innovator in International Innovation Sustainability & Entrepreneurship Summit(I2SES) , IIT Delhi	Jan 2006-Apr 2010	Volunteer , served polio drops door to door
Oct 2008	Speaker in 'Speech Contest' at R & D Polytechnic College, Ludhiana, India		

PROJECTS & PUBLICATIONS

Wind Tunnel & Aerodynamics Analysis	May 2009-Dec 2009
Fabricated a Wind Tunnel prototype after developing CAD model, flow visualizations and testing of various aerodynamic parameters on different models were experimented	
Precision Bolt Length Measuring Gauge	Sep 2012-May 2013
CAD modelling, machining and assembly of parts, made a mechanical gauge which could perform hold, align and length measurement of bolts up to 6" with the help of two opposite centers and a Dial Gauge. Manufactured by using machining processes like shaping, milling, drilling, grinding, induction-hardening and turning etc	
Square Turning Mechanism	Jan 2014-Apr 2014
Developed innovative model to turn different peripheral shapes like square, polygon into same final prior shape on lathe machine. Processes like CAD modelling, machining and assembly of parts were performed to make a mechanical working model to generate square profile followed by tool which could make square turning possible. Comparison, advantages and disadvantages were concluded with existing processes	
Fabrication of Flexible Shed & Experimented Its Aerodynamics	Jan 2014-Apr 2014
Fabricated a shed model which could accommodate flexible movement in any direction of roof w.r.t wall with the help of wishbone-bearing connection like in Hong Kong International Airport. Processes like CAD modelling, aerodynamics testing, cutting, welding and assembly of parts were performed	
Human-Powered Movable Pumping Machine	Jan 2014-Apr 2014
Designed and manufactured a combination of vehicle-manual water pump machine that was driven from human power. The design made possible to draw and collect uneven water in the tank from regions where source of energy to run a pump was not available. Processes like CAD modelling, cutting, machining, welding and assembly of parts were performed	
Abrasive Cutoff Machine Modification for Manual to Hydraulic Power Feed	Oct 2015-Dec 2015
Both side 2 hydraulic cylinders were installed to operate the feed handle. Other parts- Gear pump, 70-liter hydraulic tank, hydraulic oil ISO-68, hose pipes 1/2", limit switches, 3hp induction motor, hydraulic valves	

DEVELOPED & DEVELOPING INNOVATIONS, RESEARCH, IDEAS & DESIGNS

1___ Cross-sectional Area Converting Machine	9___ Riding Everywhere on Bicycle With Automated Pullers
2___ How to Make Travelers or Consumers Aware of Vacant Seats Around The World	10___ Rotor/turbine etc. With Small Discharge Of Fluid , & Its Related Applications
3___ Increase In Payload Without Increasing The Size Of Ship/Boat /Marine Vehicles	11___ Walking And Running Transportation System
4___ Lift And Gravitational Force Conversion Into Thrust To Increase Overall Efficiency Of Air Transportation Systems	12___ Sideways Hanging Transportation System
5___ Mechanism To Eliminate Or Minimize The Effect Of Aerodynamic Forces On Buildings Or Other Objects Subject To Airflow // ' Reverse The Effect Of Airflow On Objects'	13___ In Addition To Savings In Energy , Virtual Reality Technology Has Been Entered In ' Enclosed Air Conditioning Bed ' Design
6___ Nonstop Fastest Ambulance In The World	14___ Overhead Electric-Powered Motorbike With Cabin Public Transportation
7___ Overhead Solar-Powered Fully Automated Driverless Public Transportation Vehicles	15___ Enclosed Bed Air-Conditioning System
8___ Portable Wireless Dimensional Coordinates Measuring Instrument	16___ Transportation System Used Lift & Gravitational Force Into Forward Thrust 'To Increase In Efficiency Of Air Transportation System' ' Future Air Transportation '
	17___ Flute Shape System & Its Related Vast Applications

18___**Square Turning** Mechanism And Its Related Applications
19___**Pulling Marine Vehicles** Transportation System
20___Possibility To Reduce Touching Surface Area Of **Marine Vehicles** With The Fluid Surface/**Water Surface**
21___**Cloth Drying Machine**
22___**Flexible Board** For **Laptop, Study** etc
23___**Earthquake Proof** Buildings And Systems
24___Combined **Car Aircraft Hovercraft** Transportation System
25___**Human Powered** Movable Pumping **Machine**
26___**Overpass Transportation** System
27___**Flexibility** In Use Of Table And **Chairs Design**
28___Hanging **Bridge** Design

29___**Future Step Road**
30___**Hydraulic** System Based **Colonies, Homes** (Pascal Law)
31___**Portable** & Flexible Rope Held **Shed And Bridge**
32___Horizontal Wheel Positioned **Railway** System
33___Suction Benefit Of **Fan** On The Roof
34___Courageous **Motorbike** Design With **Sphere-Wheel** Option
35___Multi-Purpose **Buildings**
36___New Type Of Play Source (**Playground Instrument**)
37___**Bubble Travel** And Its Related Phenomena, Its Applications
38___**Call Ringing** Alert Before Actual Ringing
//more information available at www.research-and-me.com/topics/

LANGUAGES SKILLS

English- Proficient | **Hindi**- First Language, native speaker | **Punjabi**- Mother tongue, native speaker | **Sanskrit**- Medium

PERSONAL DETAILS & INTERESSETS

Age- 25 years' old | Gender- Male | Cricket, Reading, Travelling, Sketching, Research & Creativity

/Rajiv Sharma/