

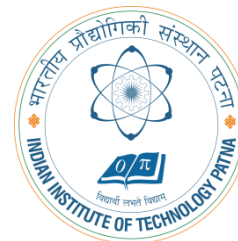
Name: Raju Gupta

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EDUCATIONAL QUALIFICATION			
Level	Year	Institute	CGPA
B Tech (Mechanical Engineering)	2012 - Present	Indian Institute of Technology, Patna	8.5/10 (Up to 6 semester)
Senior Secondary (CBSE)	2011	St. V R R N Public school (Allahabad)	88%
Matriculation (CBSE)	2009	N N Public School (Allahabad)	84%

SUCCESS STORIES:	
▪ <u>Filed Design Patent</u> for ongoing project "Quadricycle based wheat Crop reaping machine" targeted to help rural farmers who cannot afford big harvester.	March 2014
▪ <u>Founder and Coordinator</u> of Rural Technology Development Club in IIT Patna.	Nov 2012- April 2015
▪ Selected as <u>Student Representative</u> from IIT Patna in 'Ministry of Human Resources Development (MHRD)'s Rural development programme 'Unnat Bharat Abhiyan'.	Nov, 2014- Present
▪ Got ' <u>Technical Design Quotient</u> ' runner up award in an event organised by Mahindra & Mahindra.	April, 2015

INTERNSHIPS:	
Summer Internship 2015- Protoprint solution Pvt. Limited (Pune based social enterprise for waste pickers).	May-June 2015
Project Guide: CEO Protoprint -Mr Sidhant Pai (B Tech MIT USA, D-Lab fellow, MIT Media Lab Fellow)	
▪ Developed Arduino based 3d printing filament width measuring device 'Sizerbot' from customized 3d printed parts. Project was successfully implemented for real time data filament width during production of filaments.	
▪ Acquired detailed knowledge on working and development of 3d printer (Software interface, Electronics and mechanical parts), did design modification with 3d-printers to make it compatible for recycled HDPE printing. Also performed experiments with printer to get good quality print from 3d Printing filament.	
Research Topic: Thermoelectric Cooling of hot spot mitigation in microchips using Integrated Superlattice-Based TECs Devices.	May - June 2014
Guide: Dr. Manabendra Pathak (Assistant Professor in Department of Mechanical Engineering, IIT Patna)	
▪ Developed 3-d model of TEC device in Solidworks. Analytical calculated temperature distribution in thermal circuit and performance study of 1-D thermal circuit for different current and size of TEC to achieve optimization.	
▪ Used Ansys steady state thermal analysis to study the heat flux and temperature distribution.	

ACADEMIC PROJECTS:	
Project Name: Quadricycle based wheat Crop reaping machine(Team Project)	Aug 2014- Present
Guide: Dr. Mayank Tiwari (HOD, Mechanical Engineering Department) and Dr. Subrata Kumar(Assistant Professor, IIT Patna)	
▪ Projects taken under the Rural Technology Development Club, IIT Patna which aims to substitute the use of manual reaping of the crops by poor and middle class farmers in time efficient way. Manufacturing of the project is under process.	
▪ Project idea being presented in alumni meet 2014, by the Honourable Director, IIT Patna. Indian Patent attorney, Kolkata has considered project as innovative patentable and is already registered for Design Patent.	
Project Name: Fabrication of All Terrain Vehicle (ATV) BAJA organised by SAE-INDIA(Team Project)	Jan 2014- Present
Guide: Dr. Akhilendra Singh(Assistant Professor in Department of Mechanical Engineering, IIT Patna)	
▪ Design manager in steering department for team BAJA IIT Patna which has successfully cleared the virtual round and preparing in field event in February 2015. Used solidworks and ansys workbench for simulation study of steering system.	
Project Name: Low cost garbage collecting machine for Patna City (Team Project)	Sep 2014- Present
Guide: Dr. Mayank Tiwari (HOD, Mechanical Engineering Department)	
▪ Project targets to develop a low cost wired control garbage collector to eradicate manual garbage collection by workers and help in creating pollution free clean environment.	
Project Name: Push Powered Crop Cutting Machine(Team Project)	Feb – April 2014
Guide: Dr Probir Saha & Dr. S. S. Panda (Assistant Professors in Department of Mechanical Engineering, IIT Patna)	
▪ Successfully accomplished the fabrication part and looking forward for testing and implementation.	
▪ Project target to help millions of poor farmers those who cannot afford high cost harvesters. Its main focus is to reduce manual labour (Use of sickle), increased productivity, reduce fuel dependency and time efficient technology.	
Project Name: Self Running Canal based Irrigation System.(Team Project)	(Nov 2013– March 2014)
Guide: Dr. Subrata Kumar(Assistant Professor in Department of Mechanical Engineering, IIT Patna)	
▪ To develop a mechanism that can be used to pump out water from a low level flowing canal using the flow of the canal itself and without using any external power supply. The technology will help the farmers in drawing water from canals.	

MINI PROJECTS:

- **Synthesis of aluminium oxide coating with carbon nanotubes reinforcement produced by chemical vapor deposition.** (Feb - Apr 2014)
Guide: Dr. Anup Keshari (Assistant Professor, Department of Material Science and Strategic Materials)
Detailed study and prepared report on Chemical vapor deposition (CVD) to achieve a homogeneous dispersion of carbon Nanotubes (CNTs) on aluminium oxide (Al₂O₃) powder.
- **Evolution in Drag Reduction System and modern technologies.** (Sep – Nov 2014)
Guide: Dr. Manabendra Pathak (Assistant Professor in Department of Mechanical Engineering)
Studied aerodynamic drag reduction techniques in vehicles and Working of DRS (Drag Reduction System) used in F1 cars.
- Studied the working of small **unmanned aerial vehicle (UAV) Quadcopter** for surveillance purpose. (Oct -Dec 2013)
- Accomplished a report on development of **pressure sensor** to detect force applied and critical condition to fail the braking system of vehicles. (Feb - March 2014)
- Designed a **syringe-actuated four bar linkage hydraulic arm** robot to lift and place the objects at desired locations. (Aug- Sep 2012)

FOUNDER: Rural Technology Development Club, IIT Patna

It aims at fostering the technological needs of rural populace and strives to bridge the technological gap ensuring better levels of productions and living in rural areas and promote innovation in rural areas.

- (Team Members: 100⁺, Total 6 ongoing projects which include *Bangle making machine, Khaja (eatable item) Automation, Portable Soil nutrients detecting device, Drinkable water quality examining device* etc).
- As **Club Coordinator** monitored student's project, managed public media relation with Government and private organizations, Patent Application, sponsorship and organised many social welfare events.
- Currently working as **Mentor** for New core committee, responsible for monitoring regular progress.

EXTRACURRICULAR ACTIVITIES

- Membership at *SCME (Society of Mechanical Engineers)*, IIT Patna. *Organised online Technical events* and participated in various event organised by club. (Aug 2012- Apr 2014)
- Recorded Videos Lectures in regional language Hindi for *underprivileged children* to give them access to high quality educational content and submitted to *Scholars for Change campaign* at IIM-Ahmadabad. (March 2014-May 2014)
- Member of Public and Media relation Team of Annual Techno-cultural-Management. (Nov 2012- Feb 2013)
- Passionately learned and acquired knowledge on *Subject 'Introductory Sociology* (Principles by Marx, Weber, Durkheim, Globalisation, Diaspora and Indian Society).
- Member of *SAE (Society of Automobile Engineers), Entrepreneurship Club, IIT Patna, Bihar Entrepreneurship Association.*

TECHNICAL SKILLS:

- Programming Language: *Object Oriented Programming Java, C; Introductory Linux* (2012 - 2013)
- Application Software: *Matlab, Ansys Workbench, AutoCAD, Solidworks & Pro-e* (2013- 2014)

DECLARATION:

I hereby declare that all the information given above is true to the best of my knowledge.

Raju Gupta

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