
CAREER VISION

To work in a challenging environment demanding all my skills and efforts to explore and adapt myself in practical fields and realize my potential where I get the opportunity for continuous learning

EDUCATIONAL QUALIFICATIONS

Bachelor of Technology in Mechanical Engineering (CPI 7.94/10)

Indian Institute of Technology Patna

2012 –2016

Intermediate (Bihar Intermediate Education Council: 70.8 %)

S.N.Sinha College, Warisaliganj

2011

High School (Bihar School Examination Board: 79.6 %)

S.G.B.K.Sahu High School , Warisaliganj

2009

RELEVANT PROJECTS

Thermo-Mechanical Modelling of micro-Friction Stir Welding

Aug, 2015 – Present

Mentor-

Dr Probir Saha, Department of Mechanical Engineering, IIT Patna

Currently involved in a micro simulation of FSW on Deform 3D and observing and rectifying the problem coming into plunge, traverse etc. as a part of my B.Tech project in team of two. Actually, in whole, I have to simulate the micro-Friction Stir Welding and verify the same through experimental.

Industrial Product Designing : designing of Smartphone

15th May, 2015 –16th Jul 2015

Mentor-

Mr. Makarand Kulkarni, Product Designer and co-founder of Smartron India Pvt. Ltd ,Bangalore

During my internship I worked on designing of Smartphone. I analyze the market & trends and came up with original design ideas involving aesthetics, functionality, materials and manufacturability. I designed various existing and new model of Smartphone on Solid Works and Solid Edge softwares and finally submitted the final model.

SAE SUPRA 2014 and 2015

Dec, 2012 – July, 2015

Mentor-

Dr Manabendra Pathak, Department of Mechanical Engineering, IIT Patna

I worked with the team ‘Team Supra IIT Patna’ consisting of 25 students which took part in national level race car making competition SAE SUPRA , which is the Formula One Racing Car Designing National Inter College Competition conducted by SAE INDIA. In the team, I specifically worked in Department of ‘Steering System’.

- Detailed study of different research papers and materials available on steering systems.
- Calculation of various design and performance parameters of the steering system and deciding the specifications and dimensions of the various parts in the steering system.
- Preparation of the CAD Model of the Steering system in Solid Works with appropriate dimensions.
- Deciding the type, dimension, specifications of Tie-Rod linkage, Rack and Pinion, Rack Travel suitable for the car and preparing CAD model for the same in Solid Works.
- Analysis of Tie-Rod for buckling and compression prospective , Knuckle Analysis , Bump Steer Elimination etc in ANSYS

Our Team, ‘Team Supra IIT Patna’ secured All India rank of 21 in the virtual round of SAE Supra-2014; the same competition which was held in September, 2013. We also got the hands on experience of the manufacturing of the car.

Analysis of various Techniques of Plasma generation for manufacturing of Plasma Plug

May 2014

Mentor-

Dr. M.Himabindu, S.O., Indian Institute of Science (IISc), Bangalore

I worked on Plasma Plug during my summer intern period. I analyze the best suitable techniques of Plasma generation for manufacturing of plasma plug.. Instead of Spark plug if we use Plasma Plug, then it has extra advantage in terms of so many parameters like more power, more torque, better fuel economy, reduce harmful exhaust emissions. It's noble research work which will be very beneficial for automotive industry.

Manufacturing a Prototype of Stirling Engine

Jan, 2014 – Apr 2014

Mentor-

Dr Probir Saha, Department of Mechanical Engineering, IIT Patna

I worked in team of 4 members for the designing and manufacturing, a Prototype of Stirling Engine. In rural area for light purpose they use spirit lamp which doesn't give sufficient light. We made an alpha Stirling engine. Alpha Stirling engine is a heat engine operating by cyclic compression and expansion of air or other gas, at different temperature levels such that there is a net conversion of heat energy to mechanical work. For creating temperature difference we used spirit lamp which is used in rural area where electricity lacks.

Hydraulically Actuated Robotic Arm

Sep 2012

Under-

Student Council of Mechanical Engineers(SCME),IIT Patna

I worked in the team consisting of 4 members for the design and manufacturing of hydraulically actuated robotic arm. We manufactured the claw of given arm and that arm was presented in the competition organized by 'Student Council of Mechanical Engineers' (SCME) club of IIT Patna and stood 1st in that event.

TECHNICAL SKILLS

- **Programming Language:** *C, Java, and Matlab.*
- **Design & Simulation Software:** *AutoCAD, Solid Works, Solid Edge, ProE, Ansys, Deform3D*

POSITION OF RESPONSIBILITIES

- **Technical head** of "Student Council of Mechanical Engineering, IIT Patna.
- **Task Manager** at "Media and PR Team, Entrepreneur cell, IIT Patna".
- Member of "SAE Collegiate club, IIT Patna".
- Member of "Student Council of Mechanical Engineering, IIT Patna".

EXTRA-CURRICULAR ACTIVITIES

- Completed a workshop in 2nd semester on "Sixth sense Robotics – a gesture controlled robot" organised by I3-India at IIT Patna.
- Event organiser of "AQUA SOCCER" in Anwesha'14.
- Event organiser of "Death Race" in Celesta'13.
- I have organised events like "Robo Soccer" and "Wall Painting" as a volunteer in Anwesha'13.
- I was also a member of "Security and Planning Committee" in Anwesha'13.

ACADEMIC ACHIEVEMENTS

- Secured All India Rank 4863 in IIT JOINT ENTRANCE EXAM (2012) out of about 5 lakhs students (99.99 percentile) who took the test.
- Won 1st prize in Hydraulically Actuated Robotic Arm Competition in 1st year.
- Recipient of Merit-cum-Means Scholarship awarded by the IIT on the basis of academic performance.
- Secured 3rd at district level in National Children Science Congress 2008 as a Captain.
- Secured 1st at division level and 7th in state level in Science Competition on topic "Conservation of Biodiversity, Prospects and Concerns".

DECLARATION

I hereby declare that the information given above is true to the best of my knowledge, as of Sep 2015.

Prit Ranjan Kumar