

## AVINASH KUMAR

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### SUMMARY

Pursuing Bachelors Degree with major Mechanical Engineering from IIT, Patna and currently in 7th semester.

### EDUCATIONAL QUALIFICATION

Qualification	Year of Passing	Institute	Board/University	Aggregate
B.Tech (Mechanical)	2012 – 2016	Indian Institute of Technology, Patna	Indian Institute of Technology, Patna	9.21 / 10 CGPA
HSC	2011	Baldwin Academy	CBSE	71.6 %
SSC	2009	D.A.V Public School	CBSE	79.8 %

### PATENTS

#### **Manual Wheat Harvester**

In India there is many small scale farmers, so we (group of 4) developed a model for wheat harvester, which will reduce the human labour and also increase the productivity with very low cost.

#### **Garbage Collector**(under process)

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, **Patent filing** is in under process. (Group of 5)

### INTERNSHIPS

#### **IIT Patna**

**May 2014-July 2014**

Research Intern

**Mentor: Assistant. Prof Mahabendra Pathak**

**Topic: Size effect of PN junction in Thermo Electric Coolers.**

- Analyzed the power requirement and cooling effects of different size of PN junction in TEC devices using Ansys and Matlab simulation.
- Application in chip cooling in different devices.

#### **IISC Bangalore**

**May 2015-July 2015**

Research Intern

**Mentor: Associate.Prof Saptarshi Basu**

**Topic: Secondary Atomization in Droplet Drying and Combustion.**

- Analyzed the secondary atomization of colloid of alumina and ethanol ,effect of agglomeration.
- Application in Fuel/Propellant Systems.

### ACADEMIC PROJECTS

**Prototype of Manual Wheat Harvester**

**May 2014**

Successfully able to fabricate and check the efficiency of the prototype of Manual Wheat Harvester.

### **Personalized Advertisement on the Drive**

**August 2014**

To create android application which will give information about nearby shops, salons, restaurants, etc. Information will be collected by nearby Traffic signals.

## **PROJECTS**

### **Canal Based Irrigation System**

Designed a mechanism in which we can irrigate a land by using kinetic energy of the canal. Idea submitted for **Gandhian young technological innovation award** in **2014**, Sponsored by **tecpedia.in**

### **All-Terrain Vehicle (ATV)**

**February 2015**

Manufactured ATV for **SAE BAJA** Competition (Group of 18) . Designed and fabricated **chassis** (2 members) of ATV. Position of responsibility chassis design and ergonomics.

## **TECHNICAL SKILLS**

**Software Suites:** Solid Works, Auto-Cad, Ansys, Adams, Mat-Lab, PRO-E, Java, C,C++, Android, Tomagraphic PIV.

## **POSITION OF RESPONSIBILITY**

- **Founding** member of **Rural Technology Club** at **IIT Patna**.
  - Activity related to **product** design and development, Patent Application.
  - Conducting **surveys** in **rural India**.
- Member of **SAE BAJA TEAM** at **IIT Patna**.
- Member of **SAE CLUB**.

## **WORKSHOPS AND TRAINING**

- Attended workshop on **Robotics** at **IIT Patna**, in **2012**.
- Attended workshop on **IPR** at **IIT Patna**, in **2013**

## **EXTRA CURRICULAR ACTIVITIES**

- Participated in Robotics competition at **IIT Patna**, in 2012 and 2013.
- Participated in Mechanical Quiz at **IIT Patna**, in 2012 and 2013.
- Participated in Event at **IIT Patna** for idea developing a Pressure for car, in 2013.
- Surveyed a few villages in Bihar under **RTDC**, to get to know the technical problems faced by rural people.
- Participated in **Mahindra Igniters Quotient** sponsored by **Mahindra cooperation**