

HACKTRONICS

2020

*"Best innovators make
their own hardware."*



aavesh-iiittech.tech

SPONSORSHIP
PROPOSAL

presented by:



Indian Institute
of Information
Technology Una



in collaboration with:



Indian
Institute
of
Technology
Mandi





*“Innovation distinguishes between
a leader and a follower.”*

~ Steve Jobs

IIIT UNA

On March 18 2013, Ministry of Human Resource Development introduced a bill in the Parliament to establish 20 new IIITs in different parts of the country. The new IIITs are envisaged to be Institutes of National Importance. Aimed at generating highly competent manpower of global standards for the Information Technology Industry, the institutes are also expected to act as major catalyst to develop new knowledge in the field of Information Technology.

Indian Institute of Information Technology - Una, Himachal Pradesh is amongst 20 new IIITs approved by MHRD and started to intake students from 2014.

At present, IIIT Una operates from its temporary premises of Transit Campus-I (NIT Campus, Hamirpur) and Transit Campus-II (DevBhumy Group of Institutes, Vill. Chandpur, Teh. Haroli, Una, H.P.). The permanent campus is coming up in the district of Una in Himachal Pradesh.

The institute has MOU signed with IIT Ropar and IIT Mandi to facilitate collaborative development.

AAVESH

Aavesh is an electronics society that strives to teach and help students acquire new skills in an era of rapidly evolving technology in the field of electronics and communication engineering. The Society aims to provide potential minds of IIITU a platform to discuss innovative ideas and nurture their skills to tackle real life challenges in the world today and contribute to the technical society through various projects, patents and research publications. We organize various expert lectures, workshops, mentorship programs as well as competitions throughout the year to keep the students enthusiastic about hardware and software, and providing them the necessary resources to implement their ideas.

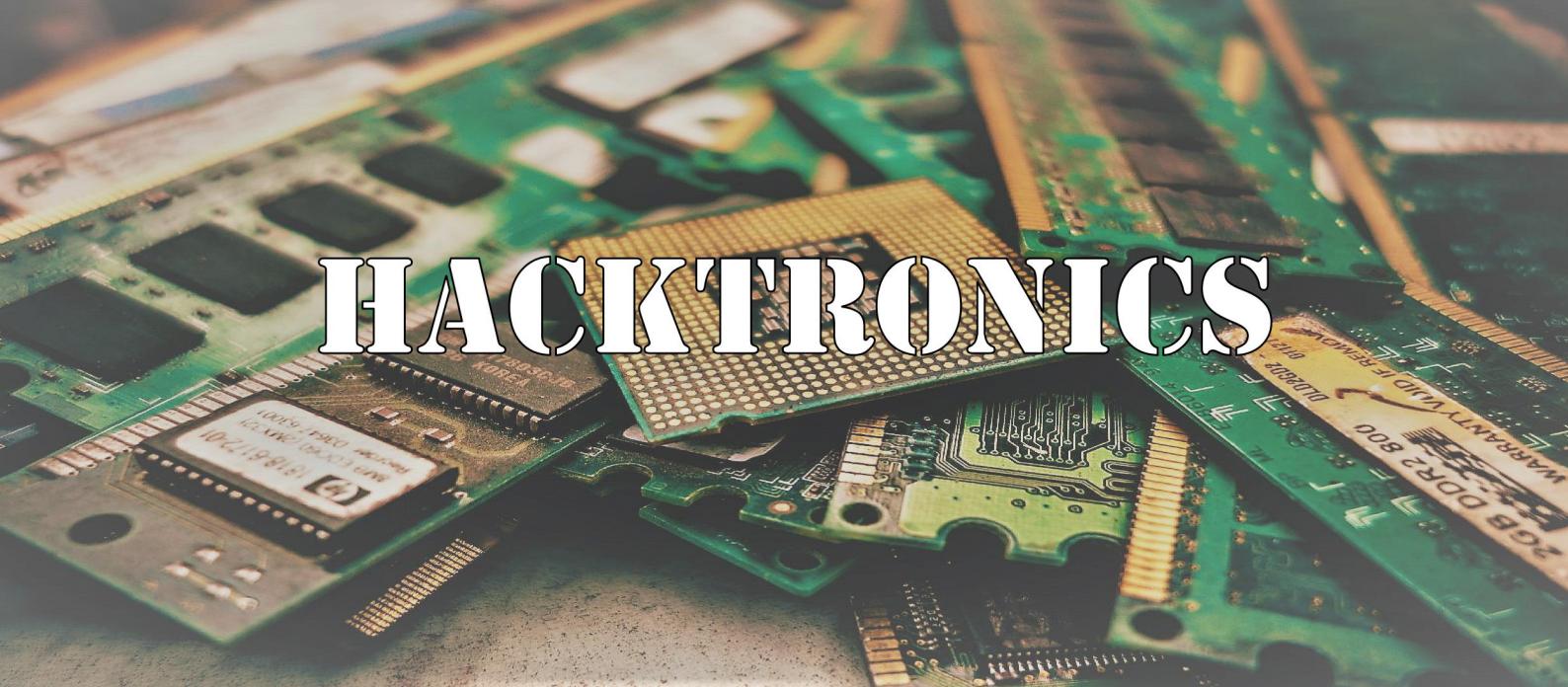


COLLABORATION WITH IEEE, IIT MANDI

Indian Institute of Technology Mandi (IIT Mandi) is an autonomous engineering and technology university located in Mandi, Himachal Pradesh. It is one of the eight new Indian Institutes of Technology (IITs) established by the Ministry of Human Resource Development, Government of India under The Institutes of Technology (Amendment) Act, 2011.

IEEE IIT Mandi is a student chapter of the Institute of Electrical and Electronics Engineers (IEEE). It is a student-run organization at the IIT Mandi with the motive to help students find their passion, to meet new people, gather new experiences, to learn industrial skills, and bring innovation in technology.

Aavesh of IIIT Una has collaborated with IEEE Students' Chapter, IIT Mandi for the first edition of Hacktronics with the aim to reach out to as many innovators as possible and induce a great electronics and hardware spirit among both institutes. The event is scheduled to be held at the campus of IIT Mandi, Himachal Pradesh.



HACKTRONICS

Hacktronics, analogous to its name, is a wide spectrum hackathon that incorporates both hardware and software to bring innovation in the field of engineering. The event is open to all ideas that aim to develop projects providing solutions to daily life problems or could help in reducing human effort.

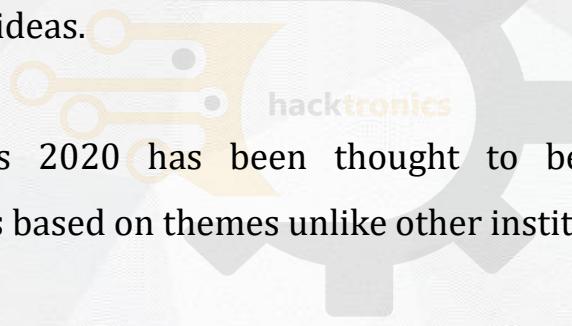
Hackathons have eventually become the origin for the most creative ideas that later take shape into some of the best products and start-ups of the 21st century. This kind of an event where one could use all available resources to bring their ideas to life should be encouraged in all spheres. This event is also envisioned to provide a platform to technical enthusiasts to redesign and improvise existing technologies and gadgets to make them more efficient.

Amalgamation of hardware and software extensively widens the horizon of ideas and opens up the possibilities for development of projects that are economical and have significant industrial applications.

Hacktronics is a one of its kind hackathon where innovators from all over the nation will get a platform to shape their innovations into prolific products which would have a potential to change the world.

WHY HACKTRONICS?

Through this event IIIT Una has taken an initiative to provide an opportunity to young technocrats to showcase their technical skills. The event is unique in all aspects as it shall incorporate projects involving the use of a wide variety of hardware and software technologies. We aim to promote a new level of healthy competitive fervour and electronics culture among various institutes. In years to come the event shall serve as a huge platform for students across different colleges to contribute in the field of electronics with their innovative ideas.

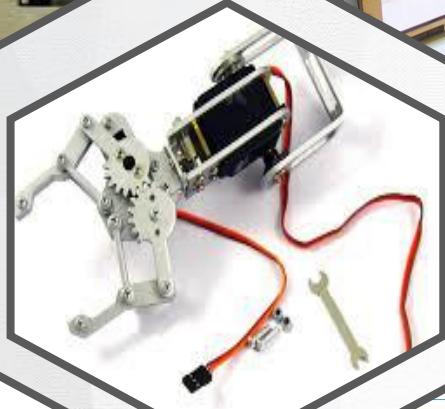
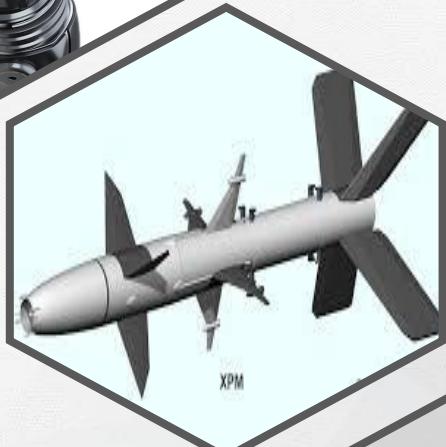
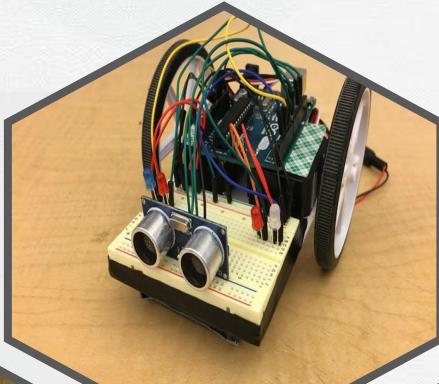


Hacktronics 2020 has been thought to be an event with no restrictions based on themes unlike other institutions.

TinkerHack of IIIT Delhi is the only such hackathon that is currently being organized in north India. Hacktronics would be the only Hardware Hackathon organised by any college in the North Indian States besides IIIT Delhi.

WHY SPONSOR HACKTRONICS?

- Promotion for your company will be featured prominently in our website and all social media platforms.
- Promotion of your company will be done on all our event posters at the campus of Indian Institute of Technology, Mandi at the time of the event as well as the transit campus of IIIT Una, i.e. National Institute of Technology, Hamirpur.
- Your company will be saliently promoted as it will appear in our brochure which will be mailed to engineering and science colleges all over India and we expect the brochures to be forwarded to all their students.
- Hacktronics targets to attract 150+ colleges from all over India and reach out to thousands of students, hence sponsoring us will help you to reach the best of the younger generation.
- Promotion of the company in all workshops, talks, and exhibitions will give a great opportunity to advertise among faculty, PhD holders, B.Tech and M.Tech students.
- The fact that **IIIT Una** and **IIT Mandi** are institutes of national importance gives an opportunity to advertise and promote and prosper your business.
- Supporting us will be a step in favour of your Corporate Social Responsibility Policy.
- You will be helping a group of ambitious innovators to pursue their passion in engineering.
- You will be supporting the development of education standards of national institutes of Himachal Pradesh.
- Sponsoring this event will help establish quality relationships.



OUR PROJECTS

1. Unmanned Combat Aerial Vehicle

A project that we are working on is Unmanned Combat Aerial Vehicle (UCAV). It will operate based on the images received from multiple cameras installed at sensitive/prone areas. It will scan foreign surveillance or other objects that may be a threat to the security of the nation. The UCAV will lock target if the object is found to be a threat and would then neutralize it.

2. Robotic Arm

In this project, we will be designing a robotic arm as a prototype for a fully controllable humanoid bot. The gestures of elbow, wrist, hand, and fingers can be transmitted wirelessly to a robotic arm making us able to control it directly from a remote place that is safe. Each of our movement is strategically synchronized to make the robotic arm imitate it. In addition, it could also be used by doctors to perform a surgery without being physically near the patient in case of emergencies.

3. Automatic Aiming Gun

Our team has created a prototype where we used a webcam that would trace the position of an object as input and produce the movement in a gun which is placed on a pedestal and is free to move 360 degrees. The system continuously detects the object and thus making the gun aim on it. Also, we designed a cursor system controlled by hand gestures based on the same concept.

4. Number Plate and Speed Detection System

In this project we designed a system by which we could detect the numbers on the license plate of a vehicle in real-time and note its speed. If they are over speed limit, the information will be handed over to the concerned authority.

5. Health Monitoring System

Patients in a coma state need to have a continuous update of Blood pressure, temperature, humidity, and urine level. This system collects the information of patients with the help of sensors. When we turn the system on, it gets connected to the website using WIFI, System monitor shows four signs namely heart rate, temperature, humidity, and urine output. While testing heart rate function of the system, the heart rate and blood pressure value get updated over IOT and LCD display.

6. Ambulance Guiding System

According to Times of India, 30% of accidental deaths occur due to delay of ambulance. This system will intelligently guide the ambulance through the urban area to a suitable hospital based on a range of live parameters.

Other projects:

Apart from this, we have worked/are working on several other projects like Autonomous car, Water Monitoring System, Quadcopter, IOT Based Plant Monitoring System, Fingerprint-based Voting System, Micromouse Maze Solving Robot, RC Aircraft and Accident Detection System.

Event Details:



April 11th and 12th,
2020



IIT Mandi,
Himachal Pradesh

Contact Information:



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aavesh-iitmandi.tech



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