



ROBOCON
IIT Roorkee



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TEAM ROBOCON IIT ROORKEE



ROBOCON, AS THE WORLD KNOWS IT

ABU Robocon is an annual **Asia-Pacific level robotic competition** **Organized** by broadcasting units of Asia including **Doordarshan** from India. Various countries like China, Japan and India participate in this Robotic extravaganza to prove their technological supremacy. Each country is represented by a single team (2 in case of host country) which consists of undergraduate students of a premier technical institute of that country. The team which will represent its country is decided by the national level of Robocon, whose problem statement is same as the international one. In India, this event takes place in the month of March in Pune which is judged by the faculties of various technical institutions.



The event has numerous rules; some outlines of the contest are as follows:

- ✚ A fresh problem statement is released each year by the host country in the month of September.
- ✚ Each team has to fabricate 2 (1 manual + 1 autonomous) robots which are able to perform the specific tasks as per the problem statement.
- ✚ The winner is decided on the basis of points scored or on the completion of tasks.
- ✚ The winner at the national level represents its country at international level.

WORK DONE (TILL DATE)

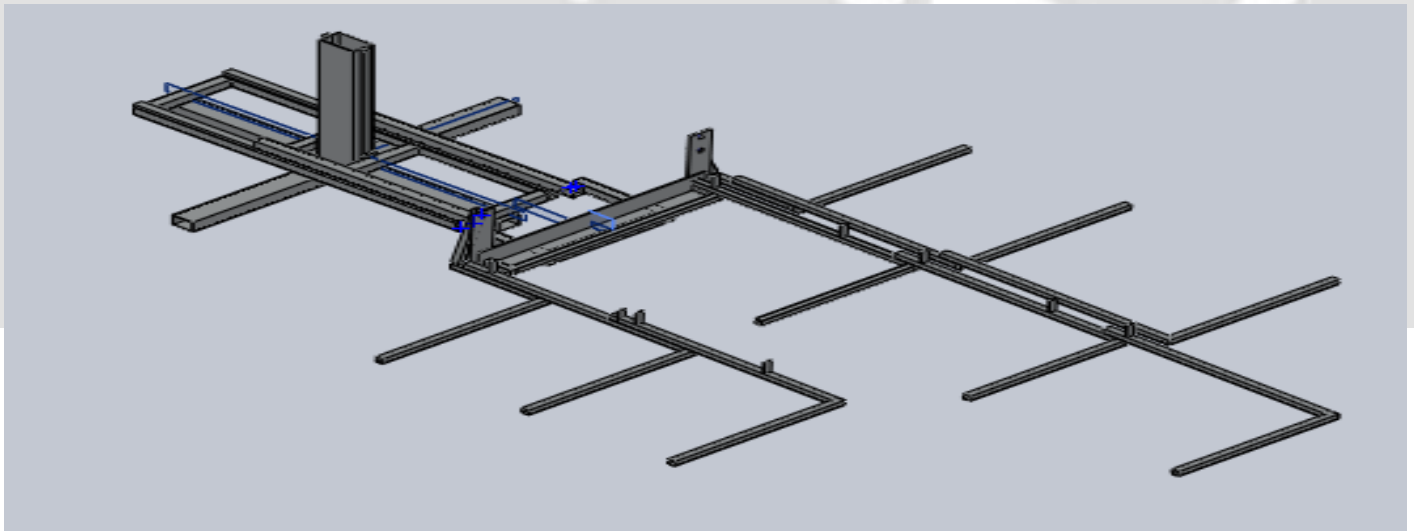
MANUAL ROBOT

MANUAL ROBOT IS DESIGNED TO PICK 7 LEAVES SIMULTANEOUSLY. IT IS A FOUR WHEEL OMNI DRIVE. WE ARE USING MOTORS MADE IN USA BY BANELOTS FOR DRIVING OUR ROBOT.



SNAPS OF THE WORK DONE TILL DATE ON MANUAL.

**WE HAVE COMPLETED MAKING CHASIS AND THE ARMS FOR PICKING THE LEAVES.
ARMS TESTED WITH PNEUMATICS.**



SOLIDWORKS DESIGN PREPARED BEFORE STARTING THE WORK.







AUTONOMOUS ROBOT

AUTOMATIC ROBOT IS DESIGNED TO PICK 4 LEAVES PLACED BY MANUAL ROBOT ON THE FLOOR. WE ARE USING LAST YEAR NEX ROBOTICS MOTORS TO DRIVE AUTOMATIC ROBOT FUNDED BY YOU.






SNAPS OF WORK DONE ON AUTONOMOUS ROBOT.

FUTURE PLANS (with estimated budget)

-  Finish the testing of autonomous robot after fixing servo motors.(2 servo motors Rs. 5000)
-  Assemble manual robot completely using industrial sliders.(2 industrial slider of customized length Rs. 11000)
-  Test self designed PCB for both the robots.(Rs. 17000)
-  Make other parts of arena for testing.(Rs. 10000)
-  Manufacture buds for the competition(Rs.10000)
-  Transportation and shipping costs.

Due to shortage of funds, our work has slowed down drastically. We feel handicapped on monetary grounds. Kindly support us:

-  By direct monetary help through DD, cheque or account transfer.
-  Giving us the contact of other alumni who can support us.
-  Helping us with contact of some company which can sponsor us.

LAST YEAR INVENTORY

- WE ARE USING LAST YEAR'S MOTORS FOR DRIVING AUTOMATIC ROBOT
- WE ARE USING LAST YEAR'S SHARP SENORS FOR SENSING LEAF RINGS.
- WE ARE USING LAST YEAR'S ARDUINO MICROCONTROLLERS.
- WE ARE USING LAST YEAR'S CASTINGS FOR ROTATION.

WE ARE VERY GRATEFUL FOR THE CONTRIBUTIONS MADE BY OUR ALUMNI LAST YEAR. SINCE THIS YEAR WE ARE USING PNEUMATICS AND ENCODERS THEY ARE COSTLY ITEMS DUE TO WHICH WE ARE FACING SHORTAGE OF FUNDS.

WE WOULD BE VERY GRATEFUL FOR ANY KIND OF YOUR SUPPORT.

REGARDS,

DIVYE ANAND
TEAM ROBOCON
B-TECH 2ND YEAR
PRODUCTION AND INDUSTRIAL ENGINEERING
IIT ROORKEE