**e-Yantra Report**

e-Yantra is a national level competition for students with engineering and technical background conducted by IIT-Bombay EYRTS labs in India.

To strengthen and test our aptitude, C++ coding along with electrical and electronic knowledge, there was a test held for each member of the team individually. We passed it and secured in top 700 teams.

Qualifying in stage 1, our team was assigned the theme: Puzzle Solver Robot using Mechanical Arm.

In Stage 1, there were two tasks assigned to us. Task1 was based on the concepts of Image Processing in which an image was given. We had to use that image and identify the numbers in the image using image processing.

In Task2, according to our theme we had to use minimum numbers of digits from grid 1 such that the sums are equal to the given numbers in grid 2. Thus we used python language to complete this task.

After submission of task2 result of stage1 (task1, task2) were declared in which we were in top 32 teams within our theme in India. And we qualified for stage2.

After qualifying for stage2, e-Yantra cell assigned us our robot worth Rs. 30,000.

In Stage2, task3 was to submit the photo of printed flex.

In stage2, task4 was given in which we submitted a documentation giving information about how our robot would look like and other factors such as power management, flowcharts etc.

In task5, using concepts of task1 and task2, we programmed our robot to solve the puzzle. A video of our robot solving the puzzle was submitted.

After submission of task5, we were given a bonus task that completed.

In task6, we had to submit our complete proper code of our robot.

Finally results came out in which we ranked at top 10th position.