DESIGN DOCUMENT AND VIDEO SUBMISSION

Template for Robotics for Good Youth Challenge India 2024

A. Team Details

As a part of Design and Video Document Submission, all teams need to submit the following online (Google Form) by the deadline as specified on the AI for Good website: https://www.ihfc.co.in/important-announcements/robotics-for-good-youth-challenge-india/.

1. Kindly choose the appropriate field

   a. Participation Type (Check the appropriate box):

	Individual Participation		Team Participation

   b. Select the Category of the Team (Assigned according to year of birth) (Check the appropriate box):

	Junior (1st January 2010 to 31st December 2013)		Senior (1st January 2006 to 1st December 2009)

2. Team Details in the following format.

Sl. No.	Details	Write Your Information
1	School Name	
2	Team Name	
3	Team ID	
4	Number of Team Members	
7	Coach/ Mentor's Name	
8	Coach/ Mentor's Mobile Number	
9	Coach/ Mentor's E-mail ID	

A. Design Details of Robot (100 Points)

1. Points to be consider

The below-mentioned points needs to be consider before developing the robot.

a. Robot size: must fit within a *54 x 30 cm rectangle*.
b. *Robots can be built with any kind of material and can be programmed with any desired platform*.
c. Refer the "Rulebook" heading "Robots" to get the detail about the Robot design.

2. Design Document

The Design Document should detail the ideas proposed in the Solution Ideas form. It should be a comprehensive document describing the proposed mechanisms for achieving various tasks. The document must include relevant calculations and justifications for the proposed mechanisms, demonstrating a clear understanding of the objectives. The design document should be submitted in a PDF file titled '*Design Details Document - Team name/Team ID*,' with a *maximum of 5 pages* (using Times New Roman font size 12). The PDF should include the sections mentioned in Table 1 and a design drawing of the autonomous robot. Drawings can be created by hand or using computer software. Each section is assigned specific points, as detailed in Table 1.

Table 1: Headings and Points for Design Document.

Sl. No.	Headings	Points
1	Clear Understanding of Objectives	20
2	Description of Proposed Mechanism	60
3	Relevant Calculations/Justifications	20
Total		**100**

The following points needs to describe in the heading "Description of Proposed Mechanism".

Table 2: Points breakup for proposed mechanism while designing the robot (60 Points).

Sl. No.	Proposed Mechanism	Points
1	Overall dimensions (in mm) and estimated weight (in Kgs)	5
2	Type of Drive	5
3	Type of actuators integrated	5
4	Type of sensors integrated	5
5	Type of Power source	5
6	Mechanism used to make the Robot autonomous	5
7	Software and Algorithms	5
8	Material Selection	5
9	3 D drawing of the Robot (Software generated/Hand-drawn)	20
	Total	**60**

B. Video Submission (100 points)

Submit a video (90 Seconds) of the working Robot by the deadline specified on the website (Google Form link for submitting the video will be sent to the registered email of team leader and Mentor). The video will be evaluated based on the marking criteria included in Table 3.

Table 3: Marking criteria for video submission

Sl. No.	Evaluation Criteria	Time in Sec.	Total Points
1	Complete 360^0 view of the Robot	10	20
2	Indicate the measurement of Robot Length and Width in mm	15	10
3	Demonstrate the Robot forward, backward or any other direction	35	30
4	Demonstrate Mechanism used to make the Robot autonomous	30	40
	Total	**90**	**100**

Note:1 Measurement of distances should be clearly shown in the videos.

Note:2 The robot design should be as per the design document. If there are any deviations, please justify the same in a separate PDF, which can be uploaded in the Google form.

1. Additional instructions for video submission

Additional instructions are given below for all the videos that should be kept in mind while preparing the videos:

i. The file should be uploaded to a single Google Drive folder which will be accessible by the judges. Only the link should be submitted via a Google Form (to be released soon).

ii. The size of the file should not exceed **100 MB**.

iii. You may use multiple cameras for better visualization with one camera showing the complete view.

iv. Ensure proper lighting conditions while shooting the videos.

v. Compliance with competition rules will be considered during evaluation.

vi. All videos should be named as "Team ID demonstrated mechanism" to ensure proper evaluation and be in the .mp4 or .avi format only.

"The submission of above documents is compulsory for evaluation and shortlisting your seat for Robotics for Good Youth Challenge India 2024."